MUKUL PATHAK

PSYCHOLOGY

VOLUME-1

CLASS NOTES

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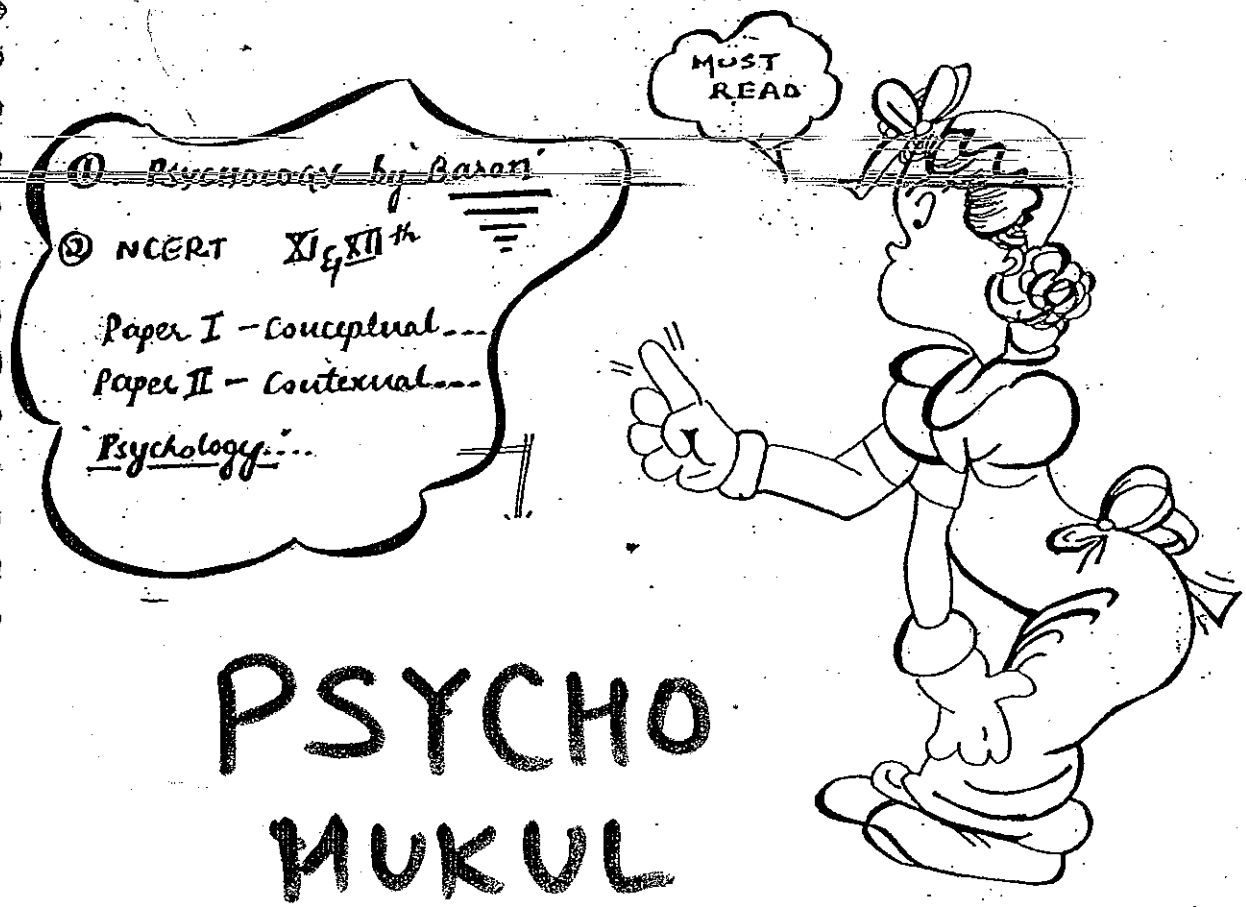
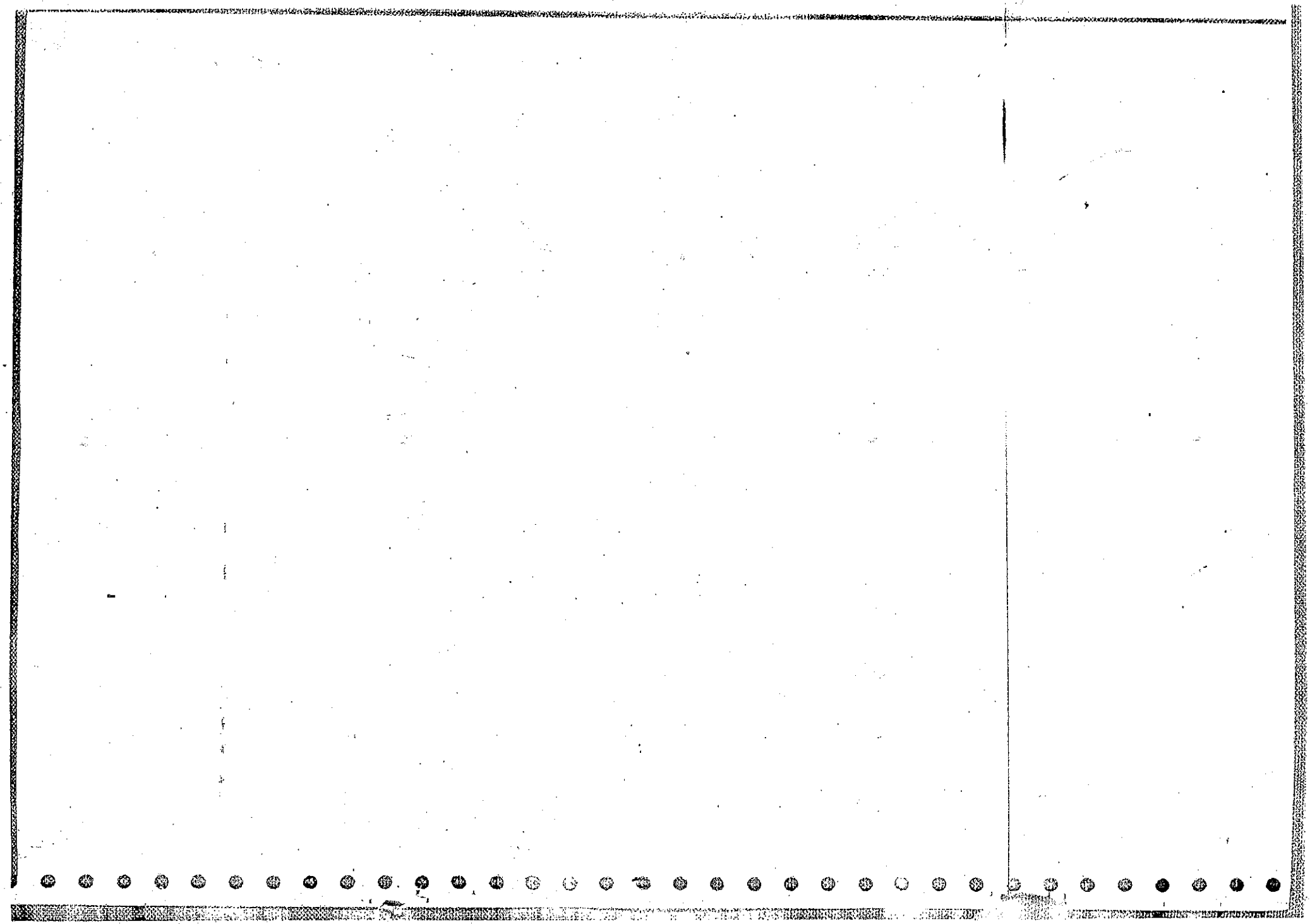
Relative permanence | Consistency

Book No. 1



PSYCHO MUKUL



2.30 P.M.

Terms used in Psychology

Motivation :

(To move) Refers to the various push and pull processes that leads to persistent goal directed behaviour

Energizes the behaviour.

Intelligence An aggregate capacity of an individual to think rationally act purposefully and deal effectively with his environment.

We process an information in such a way that it leads us to the predetermined goal and behaviour set.

Thinking

Is nothing but Intelligence in Action/operation.

It is simply manipulation of symbols.

Level of manipulation/ability to manipulate might be superior or inferior depending on the intelligence of the individual.

Mental manipulation & cognitive rearrangement of the symbols stored in our long-term memory (LTM) and the information obtained from our environment.

Symbols used in thinking include,

① language < verbal / non verbal

② Images &

③ Concepts

Memory

(or) ability to retain and retrieve previously learned information

Personality Dynamic Organization within the individual of those Psychophysical systems that determine their unique adjustment (or) to the Environment.

Dynamic — means ever changing

Organization within — within the person

Unique — something that makes us different from others

That definition was given by Gordon Allport (1937)
personality has been studied in a number of different ways. some have developed broad theories to explain the origins and make up of personality. while others have focused only on one or two issues, such as the influence of heridity or personality.

Perception (sensation + meaning)

we have different perceptions because each person may provide different meaning to his/her sensation

perception is the process of knowing the objects and the objective events by the mean of our senses.

It is an objective process despite 'perception' being a subjective subjective nature of perception should be as objective as possible - evenly. so that it is close to reality/objectivity.

Motivation also plays a role here.

If the perception is away from objectivity it might lead to misperception or wrong judgement.

Concepts

Concept is a symbolic construction that represents common or general feature/features of many objects or events

Constructs :

Construct is an event or an object that cannot be directly measured/observed but is supposed to exist because it gives rise to some kind of measurable phenomenon

direct investigation of construct is not possible.

Learning

Learning refers to relatively permanent change in the behaviour that occurs as a result of practice or experience.

INTRODUCTION TO Ψ

① Scientific status of Psychology — 20 marks
② Application and scope of Psychology — 20 marks.
③ Branches of Psychology — (Endeginally 10 marks)
④ Emerging trends in Psychology (application of Ψ) 20/30 marks
⑤ Growth of Psychology —— 30 marks.
   ⓐ Events that took place before Ψ has been established
   ~~ⓑ After ..... Establishment of Ψ as a branch of knowledge.~~
   ⓒ Psychology in 21st century.

+ Mind body relationship → 20 marks
Multicultural perspective — 20 marks.

Perspective in Ψ

① Humanistic — 20 marks
② Psychoanalytical perspective — 20 marks
③ Behavioural perspective — 20 marks
④ Gestalt perspective — 10 marks
⑤ Biological " — " — 10 marks
⑥ Cognitive perspective 10/20 marks.

Psychology definitions.

Scientific study of behaviour

Psychology = Psyche + logos

Soul + study ⇒ study of soul.

(discourse) Scientific study of soul

was the definition earlier but now it was attacked because soul is rather a construct which cannot be observed and measured, so 'scientific & soul' don't go together well.

so the definition changed,

study of soul

↓

study of mind

But then again 'mind' is also abstract concept, confusion remained the same so it became,

↓

study of consciousness

Use of 'consciousness' also was confused so finally, it became

↓

study of Behaviour,

where, Behaviour is anything an individual does which can be observed and measured in some way

Soul → mind → consciousness → Behaviour.

this definition of Psychology is widely accepted and being used till date.

To call it scientific, any knowledge (branch of) should be

- measurable
- observable

only when the word/concept 'Behaviour' which can be observed and measured. Psychology is considered as scientific study. this subject matter of Ψ restricted transition ∵ it wanted to be called as a discipline of science

Ψ history is short, past is very long.

Psychology is the scientific study of behaviour and cognitive processes.

Behaviour + cognitive process

(Overtly observable + covert process)

Psychology studies behaviour guided by the objectives of,

① description
② understanding
③ Prediction
④ control

goals of psychology that guides the study.
Psychology needs to have the value attached to it
be
inorder to a discipline of science.
Subjected to Qualification.

Morgan & King

Defined as, ~~the study of human and animals~~ scientific behaviour which includes the application of this science for solving human problems

Growth of Psychology

Psychology has its roots in philosophy but emergence of Psychology as a science of behaviour can be attributed to certain important developments in physiology and physics which ultimately culminated in establishment of first psychological lab @ Leipzig by Wilhelm B Wundt (1879)

Such establishment of a laboratory helped in establishing cause and effect relationship. It further helps us in attaining at theories of Psychology & prediction & control.

When we have theories of a subject with an universal appeal helps us to understand the subject in a better.

But he wasn't successful in carrying out objective studies as he used introspection as the method to attain that nature than experimentation.

Scientific status of psychology

Science is a body of systematized knowledge gathered by observing and measuring events.

features of science

① Observation : } instrumental in making the study
② Measurement } objective.

③ systematic collection and analysis of the data

Observation :

It is a systematic study of an event or a behaviour with maximum precision and minimum bias

whenever an experiment is done, there would have

an independent variable/s
Dependent variable/s
Extraneous variable/s

Eg : Marijuana improves creativity in an individual

dependent : marijuana
independent : creativity
Extraneous : suggestion, mood of the individual.

Controlling extraneous variables is always a challenge in case of human beings.

bias can be minimized but not completely controlled

Psychology always seems for obj establishing objective relationship between cause & effect relationship but it will get diverted for the cause being that, extraneous variables are very difficult to control.

- this is called Experimental method

It is diffent from correlation method where there are only assumptions and speculations.

→ so

Maximum precision and minimum bias becomes possible when extraneous variables are kept under control. therefore controlled study of a behaviour or an event is what a psychologist strives for. and this controlled observation is nothing but Experimentation.

When extraneous variables (EV) are rigorously controlled independent variables are effectively manipulated and dependent variables are objectively measured, then an unconfounded cause-effect (IV-DV) relationship is tried to be asserted.

In physical sciences the researcher is able to exercise the rigorous control over extraneous variable (EV), effective manipulation of IV and objective measurement of cause & effect relationship & can arrive @ a definite cause-effect relationship for most events under investigation, however the same is not always applicable in psychological researches for the various reasons which are as follows;

1. dynamic nature of human behaviour
2. Multivariate nature of human behaviour
3. Ethical and social constraints placed on the researcher
4. Artificiality of the research / experimental set up

Because of an above limitations the cause effect relationship in Psychology always carries the risk of being somewhat contaminated. but it must be admitted that it is the endeavour of any psychologist to be as precise and as accurate in his findings as possible. thus psychology can't match the objectivity in the observation possible in physical sciences. but there is always an effort to come as close to physical sciences as possible, (this is where)

Measurement:

Measurement is the assignment of numbers to objects and events according to some rule, in physical sciences the use of ratio scales for measurement happens to be possible and as a result the quantification obtained happens to be very precise and accurate.

In Psychology the use of ratio scales is not possible because of the absence of absolute '0' and therefore the findings happen to be less absolute and more relative.

Unlike physical sciences, here in Psychology there aren't absolute numbers & calculations everything is relative here

Eg: an individual can't have '0' intelligence < low / high
absolute zero can't be '0' attitude < +ve / -ve

So in P we use either interval / ordinal scales

Psychological measurements happen to be less objective in comparison to physical sciences also because they happen to be indirect.

Eg: To calculate an individuals memory direct calculation is not possible, it could be measured only through his/her behaviour.

(5). Psychological measures are generally incomplete as the entity being measured also happens to be incomplete.

∴ Human behaviour is dynamic and multifaceted so the tools used to measure the complexity of complex behaviour are incomplete.

Eg: Driving aptitude, to measure driving aptitude we may consider, Reflexive behaviour
Psycho motor coordination
Reaction time
Distance perception
Cognitive map making
Decision making, Intelligence.

Practically, to make the def complete comprehensive, there should be a common agreement on the definition of driving aptitude in the first place.

Still there might be disagreement regarding the characteristics which constitute Driving aptitude.

Weights to be attached to each factor i.e. possibly importance given to a particular factor.

Yet again there would be disagreements / lack of consensus on how to device items (questions) to measure each attribute included test and how to include all the questions in a single test and yet not make it a lengthy one.

when a narrowly based testing aptitude could be so troublesome imagine more complex concepts, which are broad based.

So Psychological testing suffers from many limitations like this.

Quantification has been taken up with much interest and keenness compared to other behavioural sciences but this attempt has not made Psychological testing/Quantification as objective as physical sciences.

Because of the above mentioned limitations psychological measurements are not as precise and as accurate as measurements in physical sciences but there is an effort on the part of Psychologist to make the measurement of variables under investigation as objective as possible.

Systematic collection and analysis of data.

Psychology lays emphasis on a systematic rather than casual study of a process or a problem.

Psychology starts with a hypothesis and they try to determine the relationship among the variables of interest, they natures of objective methods for data collection, Organization and validification. the attempt is to apply quantitative treatment to the data collected wherever possible inorder to arrive at meaningful inferences.

Quantitative treatment makes comparative analysis possible and generalizations effective.

Generalization - abstractness.

↓ ↓

faulty generalization ∫ ↓ incorrect abstractions

Subjective pole. Ψ Objective pole.

Metaphysical sciences (philosophy). Bipolar continuum. Physical sciences.

~~Two years back Ψ was not so close to being an objective~~ Subject now that equipments ~~are developed and introduced~~ of it will acquired its present position. and in time to come, it will move further and become one to ~~the~~ physical sciences.

Ψ occupies a position close to physical sciences on a BPC with one pole representing metaphysical sciences like philosophy and other pole representing physics and chemistry further, in times to come Ψ is likely to further narrow this gap that exists between it and physical sciences. as more sophisticated measurement methodology is likely to be invented and implemented.

But it will never be able to completely overlap with physical sciences. for the reason Ψ deals with humanbeings where as physical science deal with atoms.

Subject matter is just restricting it, but that doesn't mean it is not science.

Psychology as science (additional pts)

① Ψ is a science because it lays emphasis on the search of truth by advocating objectivity in the assessment of behaviour. it is an endeavour of every Ψst to be as objective as possible by observing and recording full facts in an investigation. and not simply those which corresponds to his expectations.

he gathers information on the basis of merit rather than one's personal preferences.

② The methods and the techniques employed in the study of behaviour in Psychology are quite scientific, there is emphasis on accuracy by being as precise and as careful as possible in the gathering of the data.

③ the results of the study of behaviour usually stand for test verification in similar other conditions by other experimenters and observers. Psychology submits itself to the goal of skepticism that is accepting the findings as true only after they have been verified again and again and all inconsistencies have been removed.

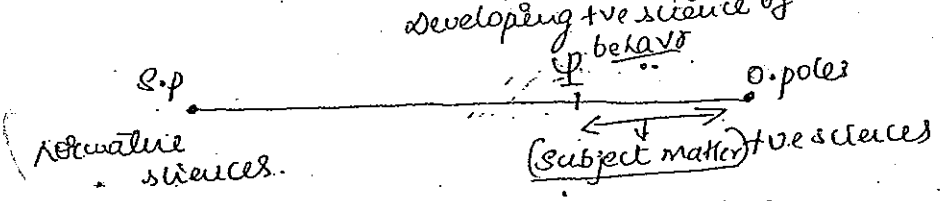
④ The appropriate description and quantification is possible in Psychology and this makes it possible to have trust worthy predictions.

⑤ Ψ possesses well organized study which is supported by relevant laws and principles, it is a practical discipline that has been applied for human welfare.

⑥ Many of the facts, principles and laws of behaviour in Psychology enjoy universal applicability in practical life and other bodies of knowledge.

this Ψ is a science because it is committed to the goals of objectivity, accuracy and skepticism moreover it adopts methods and values of science in its efforts to understand all aspects of human behaviour.

Normative & positive Sciences and place of Ψ

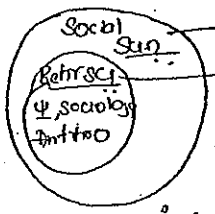


Normative sciences study what ought to be?
positive ~~research~~ study what is? (factual and empirical)

the gap is becoz of the subject matter, human and animal behaviour, ethical and social limitations.

Ψ and social sciences.

social sciences: study of man as a social being, as a member of this society.



→ social science is a generic term
→ Behavioural science is more a specific term.

Social science is applied to all those disciplines that are involved in the study of man in relation to his society. history

but the range is very wide, from disciplines like economics to disciplines like economics.

If we consider Ψ as a social science subject (of course it comes under social sciences) but will be termed as a 'unique social science' bcoz of its exclusive interest in

⊙ study of Individual behaviour.

⊙ It studies wide range of behaviours.
⊙ It studies behaviours with a focus on arriving at precise and accurate cause effect relationship.

Because it is unique social science, it is more appropriate to call it Behavioural science.

Study people from the viewpoint.
Study of people in contemporary society - Anthro through direct and empirical research
there is a deployment of rigorous and scientific methodology.

Ψ is govern social science, define social science. State it, it is more appropriate to call it a Behavioural science thus it it different from other social sciences with respect to the rigor in which scientific methods which have been adopted.

Ψ, sociology and anthropology are all behavioural sciences. Ψ - focus is on individual behaviour sociology & anthro - focus on collective behaviour.

same degree qualification that has been taken place in Ψ has not been achieved by sociology and anthropology.

Inter disciplinary characters of Ψ

Interphase that Ψ has with other branches of knowledge also can be quoted as, Relationship of Ψ with other disciplines.

Ψ is both importer and exporter of knowledge, Explain?

Anthropology & Ψ

Anthro ⊙ Anthropology is the study of man in relation to his Environment & culture

⊙ Study of man in simple societies/society.

⊙ Study of the manner in which human civilization developed.

⊙ Study of origin of man & ↑

Ψ is also the study of man but it is, the study of man,

⊙ in contemporary society

⊙ with individual focus

Ψ & anthro share that subject matter which is the study of man but they differ in the perspective they adopt to study man.

Anthro studies man from macro perspective

Ψ studies man from micro " "

Anthro - collective behaviour / simple society

Ψ - individual behaviour / complex society.

Ψ - studies people exclusively studies contemporary society.
anthro — contemporary + simple society.
Macro perspective investigation requires micro perspective inputs.
micro perspective investigation requires macro " — " inputs.
- Ψ and anthro are interdependent.
Ψ facilitates anthropology investigations and viceversa.
~~i.e. to study intercultural behaviour we need to know~~
group behaviour and viceversa is also true.
they are (Ψ & anthro) influenced by each other and are influencing each other.

The intimate interaction between Ψ and anthropology has given birth to a hybrid discipline called as,
Psychological anthropology; which studies the interrelationship between culture and personality.
... Eg: Self < interdependent (oriental culture/Indian culture)
independent (western culture)
the difference is due to child rearing practices. (CRP's)
Next, the focus is on independent.

Importance & Expertise :- Ψ not only borrows knowledge, inputs from other disciplines but also influences.
Contributing for the development of other disciplines.

Psychology & sociology.
Sociology is the scientific study of modern society.
Sociologists are interested in the study of group behaviour.
in contrast Ψsts are interested in the study of individual behaviour.
Perspective (micro & macro) exists here too
And the intimate interaction between the two has given rise to a new discipline called as Social Ψ

which studies the group behaviour with the focus on the individual.

individual ⇄ influence ⇄ group.
Reciprocal Relationship

Anthro → Sociology → Psy
(group) (group) Individual
Simple society. Modern society. Complex society

Psychology & Biology.

Every Individual is a product of Biological factors
Environmental "

Biological factors ← (I) → Behaviour.
Nature
Nurture
Environment

Studied by Psychologist.

Biological Factors (Nurture)
- Genetic dispositions
- Biochemical factors (Hormones)
- Neurophysiological factors.

Environmental factors (Nature)
- School - neighbourhood.
- family, peer group.
- media, CRPE, Religion.

Biological factors will be investigated by biologist and environmental factors would be investigated by Anthropology & sociology, Psychologist is the one who combines these two and make sense of the information available.

Biological basis of behaviour is studied by biologists and the insights provided by biologist enable the psychologist to carry out the comprehensive enquiry of the individual behaviour.

The intimate interaction between biology and Psy has led to the emergence of a no of hybrid disciplines such as, physiological psychology and neuropsychology. psychoneuroimmunology.

physiological Ψ deals with the relationship between brain and other biological activities and behaviour whereas neuropsychology studies the role and the impact of nervous system and its functions on behaviour.

Psychology & Physics :

Ψ today, can boast of having precise and systematic ~~way of observation~~ and measurement → its roots can be traced in physics.

so many physicists have contributed to the development of Ψ.

Eg : simple example of pen,

Pen now → Pen 10 years ago.

Equipments have become more user friendly now. Often resulting in maximization of productivity, optimization of human management.

Ergonomics / Engineering Ψ — Result of Physics + Psychology.

Many modern equipments and instruments that are used for psychological research have been borrowed from physical sciences particularly physics. for instance, 'psychogalvarometer', which is an instrument used for measuring anxiety is the result of research in physics.

The intimate interaction between Ψ and physics has given rise to many branches & many hybrid disciplines such as Psychophysics, Engineering Ψ etc :

while as Psychophysics is concerned with the study of the threshold for various sensory activities of human beings using the principles and concepts of physics.

Engineering psychology in contrast involves the study of man machine interface.

Psychology & chemistry.

eg: anorexia, smell of the food might ↑ or ↓ one's apetite.
pheromones, human smell, sense → deodrant industries
advertisements of the motives.

chemistry specially biochemistry has contributed richly to our understanding of behaviour. chemical analysis of neurotransmitters and hormones and various other bodily secretions and excretions have enabled the psychologists to improve our understanding of human and animal behaviour.

Psychology & History

Future is the child of the past, and history & the study of past, contemporary society is an offer of past (History)

History is the study of past events, a historian is concerned with the study of the behaviour of the people of the society that once existed in contrast psychology is the study of behaviour of the people in contemporary society. through its record keeping and analysis, history does provide a basis for studying the behaviour. the history of a civilization is the history of human development and therefore psychologists at times take help from the historians to enrich their understanding of human behaviours.

Infact the intimate interaction between the two has led to the development of psycho history which is an attempt to understand historical events by providing detailed psychoanalysis of the characters involved.

Psychology & Economics

Every economic activity has psychological basis. Economic decision making.

human behaviour of economic decision making is largely irrational. ∴ Emotions guide our decision making.

Economic studies how human beings behave in materialistic exchanges which involve some notion of value in every material exchanged the behavioural element is

and as a result of economics often come together to study the economic decision making of man.

Infact, the intimate interaction between Psychology and economics has given rise to behavioural Economics which is an attempt to define and also explain economic activity in the context of human psychology.

Kahneman & (~~Tversky~~) Tversky have tried to explain how decisions are taken by people when they had to choose between alternatives of uncertain risks. They found that human beings tend to overreact to small probability of events and under react to medium & large probability of events. The understanding provided by them opened a window to explaining human economic behaviour.

Psychology & political science:

political science studies the role of power and politics in the life of a community and examines the various systems of politics.

Political scientists are interested in the topics like leadership behaviour, voting behaviour and political ~~beh~~ developments like revolts, 'coups' and all these issues have a psychological angle to them.

Intimate relationship between pol. science and Psy has given rise to political psychology, which studies political events from the psychological angle.

Branches of Psychology / Areas of application of Ψ
Subfields of Ψ.

Clinical Psychology.

Clinical psychologists are the doctors who diagnose the mental disorders and treat them via psychotherapy.

Clinical Ψ therefore is concerned with diagnosis and treatment of the behaviour that is regarded as abnormal.

Clinical psychology is also concerned with research and development.

Clinical psychologists rely upon psychological tests for the identification of mental disorders.

Clinical psychologists are however not authorized to prescribe medicines which happen to be the domain of Psychiatrists.

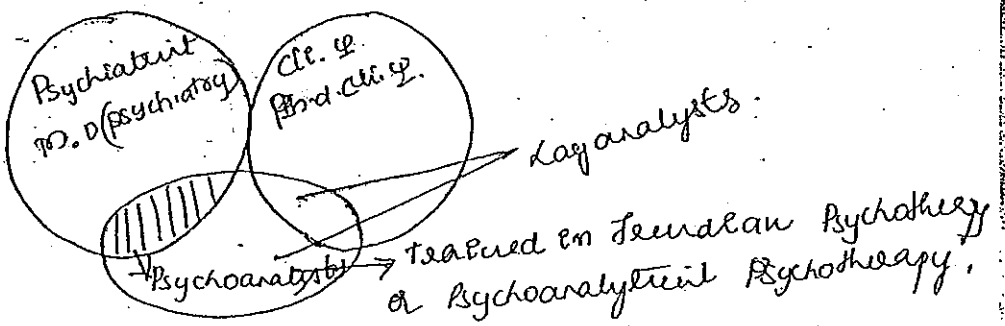
Disorders < Organic pathology → Biological Reason
Psychopathology → Eg: ulcer (Lead)

Neurological disorders — those disorders resulted due to, Brain dysfunctioning.

Organic pathology could lead to psychopathology and vice versa because of the body mind relationship that exists.

Biological malfunctioning ⟶ Psychological dysfunction.

It has a recursive, → happens in all the cases. Its nature. Endurabilities.



Sigmund Freud's psychoanalysis deals with Unconscious.

Clinical Ψst do Psychological testing & research.
Psychoanalysis. (diagnosis & treatment).
Therapy.

Psychiatrists : prescribe medicines.
They can provide Psychotherapy but generally clinical Ps do it.

Lay analysts – those who are trained in Freudian Psychotherapy but are not psychiatrist. but have a ph.D or a clinical psychologists.

Counselling Psychology.

~~The work of a counselling psychologist is similar to that~~ of the clinical psychologist except that he deals with individuals who have mild Emotional and personal problems.

Counselling Psts are also consulted by people with a specific question such as the choice of a career & an educational programme. It makes use of psychological tests specially those that measure aptitude, personality & interest to help the people who have a problem with family living.

Educational & School Psychology.

It is the study of how human beings learn in Educational settings. the effectiveness of Educational interventions, the Psychology of teaching and social psychology of schools as organisations. thus Educational Psychology is concerned with using principles and concepts of Psychology in improving teaching and learning processes in schools and colleges.

They are also involved in curriculum enrichment, individualization of education and making education job centric.

Immediate intervention → School Pst

like techniques like persuation, etc.

Educational Ps - long term transactions

School Psts are concerned with more pressing problems and their job is to diagnose the learning difficulties faced by the children and suggest remedial measures.

They also provide Vocational counseling and act as a link between parents and their children and if the problem is from the child possess

with his parents.

Developmental Psychology

is concerned with pre and post natal processes of growth and maturation (inside the womb pre-Outside post natal) Since most of the developmental milestones are accomplished in the initial years of life, the study of child behaviour assumes a large portion of developmental psychology and the psychologists who specialize in it are called as child psychologists.

development ψ = Life span Psychology: (°: it traces development throughout the lifespan of an individual

Industrial Psychology / organisational ψ

Employee employer relationship.

Organizational climate & effectiveness.

personnel selection and training.

Industrial psychology is the application of psychological knowledge and methods to optimize human potential in the workplace. Personnel psychology is a subfield of industrial psychology and applyies the methods and principles of psychology in selecting and evaluating workers.

Apart from personnel selection industrial psychologists are also involved in personnel training, job designing, human engineering executive development programmes, bringing about improvement in organizational climate and effectiveness etc.

Human engineering, - designs equipments in such a way that it increases human efficiency.

Job design ⟹ Balancing professional & personal life.

Human Factor Psychology

is the study of how cognitive and psychological factors affect our interaction with tools and objects in the environment. The goal of research in human factor Psychology is to better design objects by taking into account the limitations and biases of human mental processes and behaviour.

Experimental Psychology.

Experimental Psychology studies fundamental processes responsible for behaviour such as thinking, learning, perception, motivation, emotion etc.

Experimental psychologists do pure research and they are concerned with the study of the relationship between brain and other biological activities and behaviour such psychologists are called as physiological psychologists.

Social Psychology.

It is the study of social behaviour and mental process with an emphasis on how human think about each other and how they relate to each other.

Social Psychologists are interested in how people react to social situations and they study topics such as persuasion, conformity, attitudes, prejudices, stereotypes etc.

The study of group dynamics is another important area of social Psychology.

Health Psychology.

It studies the influence of psychological variables on Health. Health psychologist explore the relationship between individuals mind and his physical condition. the issues such as the role of stress on physical health, role of social support during illness, role of physicians behaviour on patient's health are examined by health psychologists.

Aerospace Psychology

Is concerned with studying physiological and psychological changes that take place in an individual during high altitude and space flight.

Correctional Psychology.

Is concerned with understanding and changing anti-social behaviour.

They are concerned with treatment and correction of criminals and delinquents.

Below 18 — Juvenile delinquents.

Geo psychology.

Is concerned with the study of concept of physical environment particularly weather, climate, soil and landscape on behaviour.

Para Psychology

Is the branch of psychology that deals with Extrasensory perception for the study of sensory / paranormal event

eg:- telepathy, clairvoyance

Jaimas U — negative recognition of places

Déjà vu — vice versa.

Military psychology

Branch which is concerned with the use of principles & techniques in the field of military activities issues like how to conduct Psychological warfear, how to maintain high morale of soldiers and civilian population during war time, how to improve combat effectiveness of soldiers, how to improve organisational effectiveness in military etc are the topics / issues taken up by military Psychologists.

Comparitive Psychology.

It is the sub discipline of psychology that is concerned with investigation of behaviour of various animal species other than human beings. With the intention of drawing comparisons between them and through the studies of animals gaining insight into human behaviour.

Eg: Research done on Monkeys by Harlow

Contact comfort, → baby monkey's behaviour of clinging to its mother — same with humans as well how,

Quantitative Psychology

Involves the application of mathematical and statistical modelling psychological research and the development of statistical methods for analysing and explaining behavioural data.

Related to quantitative Ψ is a branch of Ψ called as Psychometric psychology which is concerned with the formulation of ~~psychological tests for the measurement of human abilities~~ Psychometric psychologists not only devise Ψcal tests but also undertake steps to improve the reliability and the validity of the existing instruments.

Political psychology

is concerned with the issues and the problems related to people and their relationship with authority generally political in nature. Leadership behaviour, voting behaviour etc are the areas of interest for a political psychologist.

Personality Psychology

Studies enduring pattern of behaviour, thought and emotions in individuals commonly referred to as personality. They are concerned with the study of growth and development of personality.

They study socialization practices in order to examine their impact on behaviour. They also study the interaction of heredity and the environment in the development of the traits.

Sports Psychology (Sports & exercise Ψ

It is concerned with the application of psychological principles and concepts in helping the sports personel improve their performance.

Psychology enters into the behaviour of the sports persons in a variety of ways ranging from helping them improve their psychomotor coordination to improving their attention

Cont.

Forensic Psychology

covers a broad range of practices primarily involving clinical evaluation of dependents, reports to judges and attorneys, and court room testimony on given issues.

Forensic psy are appointed by court to conduct competency to stand trial evaluations, sanity evaluations, provide sentencing recommendations, sex offender evaluations, treatment evaluations, and reconendations to the court through written reports and testimony.

Debates and controversies in Psychology.

Determinism Vs Freewill.

Forces within the individual or outside over which he has no control

→ Behaviour.

choices & intentions.

Inside (Free will)

- Instincts
- Genetic predisposition
- Biochemical & neurophysiological factors

outside i.e society & family.

No man is completely independent of his heredity & society alone.

Freewill will work when determinism is not overpowering and vice versa.

Its that, which of these forces was dominant @ that point of time will influence the individual.

Authoritarian → Democratic

Deterministic → Freewill.

Indian context, its more deterministic, familial. west is driven more by freewill.

Some people are biologically predisposed to few traits more. Any behaviour is a product of interaction between inheritance and environment

Behaviour = Inheritance (additional factor) × Environment

'Self', can it be considered as a factor which determines the behaviour of an individual apart from instincts and genetics?

Determinism :

- Environmental determinism — Before being governed by environmental made corner stone by behaviourists, contagenius that operate on an indi
- Biological determinism — made corner stone by physiological (Biological with that heredity)
- Psychic determinism — Freud neglected ignored it ∴ instinct ✓

① Behaviourists said, human behaviour is the result of environment alone, such extreme views were not accepted by others who belonged to different school of thought.

② → other school of thought attributed every behaviour to inheritance / genetic predisposition, this is extreme view.

③ → Freud & other psychoanalysts proposed psychic determinism.

behind instincts were responsible.

Freewill.

psychologists who didn't accept above views and said choice & intentions were responsible.

they were called Humanistic Pst.

Based on their theoretical orientation, beliefs different schools of thought emerged overtime.

There was no consensus on one view, views differed.

If gave rise to emergence of 3 main schools of thoughts,

1. Psychoanalytical
2. Behaviourist
3. Humanistic

} 3 FORCES.

Determinism follows from the work of Perkley Locke & Hume. who believed that human behaviour is the result of forces over which human beings have no control. this applies to forces both within and as well as outside the individual.

Internal forces include, genetic predisposition, biological need states and instinctive energy and the psychologist who consider internal forces as responsible for behaviour are said to favour the idea of biological determinism.

In contrast those psychologists who consider the determinants of behaviour to be outside the individual are said to follow environmental determinism and they account for human behaviour in the terms of learning experience and the stimuli in the environment.

human psyche/behaviour is too versatile/complex ar to be explained with one school of thought alone.

the relative strength of too forces (heridity & environment) at that time will determine what influence the individual. so still exists diffent school of thoughts.

Freewill :

proactive direction comes only when in the life.

The proponents of freewill approach view individual as a pro-active creature who is capable of detaming the course of his environmental events. Human beings are capable of exercising choices and judgement. and carry the ability to work against even environmental and even biological forces if the need be.

Q. Can we conceptualize "self" as an additional force that determines the behaviour other than heridity & environment?

Freewill

$B = H \times S$

⊙ How can will influence biology? Eg - meditation.

⊙ Can free will influence environment? Yes.

Molecular & Molar approach:

Molecular approach is also called as Atomistic approach, Reductionism.

~~Molecular approach is taught of effort of behaviourists~~

Molar approach was introduced by Gestaltists later it was also adopted by humanistics.

They talk of 'self' as a unitary concept, an integrated approach

Molecular:

Behaviourists & Biologist perpetuie people favoured & aim was objectivity, spoke of self as parts.

Comprehensive enquiry involves analysis of small parts so that objectivity is assured.

Studying part by part is better.

Molar:

Said it, whole is more than the sum of its parts, complete, comprehensive analysis can be made as a whole not in parts. there were approaches wholistic approach. Gestaltists proposed it.

Atomic approach & Reductionism are another set of concepts proposed by 'structuralists'

this was later studied, broadened and accepted by Gestaltists & Humanistics.

studying human beings in a comprehensive manner. they believed that, dividing self into smaller parts would lose out the diversity which is an unique character of human beings.

molecular approach advocates that for objective enquiry behaviour must be broken down into smaller units.

Atomism is the doctrine that mind can be reduced into a finite number of irreducable elements. (Ecologists)

Reductionism is the philosophical viewpoint that maintains, that complex phenomena are best understood by components into fundamental analysis which breakdown the phenomena into elementary aspects. (Behaviourists)

The early structuralists attempted to reduce perception to elementary sensations likewise behaviourists seek to reduce all complex actions into S-R (Stimulus-Response) terms.

Molar molar approach advocates that behaviour should be studied as a whole (entire unit) because when broken down into parts it looses the intrinsic nature of whole. (Humanists)

Soft determinism not so popular.

Soft determinism holds that the behaviour is determined by environment and instinctive process but only to an extent while a person can choose between a number of courses of action there is freewill only when there is no compulsion.

Nomothetic Vs. Ideographic approach.

What should be done for? general laws, necessary?

Without General laws no branch of knowledge could be scientific so we need general laws

out of several schools of thoughts Egirts with molecular orientation would be able to establish general laws Compared to molar psychologists.

At the same way individual differences should not be neglected.

Ideography — Study of uniqueness of the individual.

Like humanists.

Psychology is not science bcoz it studies individual difference idiographic point of view?

Ans :- NO, as far as possible, it will not neglect the importance of individual uniqueness. and yet strive for establishing general laws.

so idiographic doesnot mean it is not a science.

Objectivity, which is achieved by natural sciences may not be attained by it with respect to the subject matter as such.

Nomothetic

Nomothetic approach involves the study of a group of individuals in order to discover the laws of behaviour.

The advantage of this approach is that it allows for the generalization of the findings from the sample of participants in the population. The drawback of the research is that it ignores the whole person. Individuality is lost the moment the person becomes the statistic in a sample.

Idiographic approach.

It addresses the wholeness and the uniqueness of an individual and aims to provide the complete indepth picture of the person being studied. The problem with the research is that it tends to be subjective and fails to tell us anything about others.

Nativism Vs Empiricism (Nature Vs Nurture)
(Heredity) (Experience)

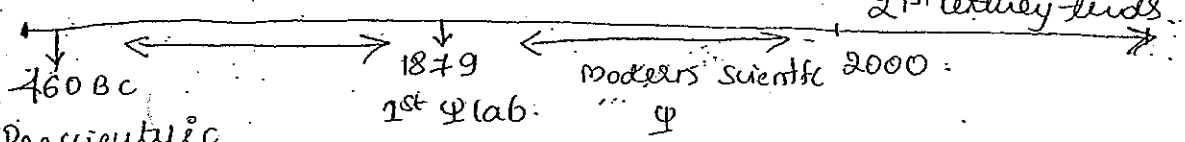
Interactionism :- Compromise, balanced approach b/c where two genes provide - Reaction Range & Environment decides whether you reach the upper end/limit or not.

Is the doctrine that the capacity to perceive the is inborn. more contemporary representation is the that stresses the genetic and inherited influences ur and stronght over the acquired and experiental (ero) influences.

A broad based philosophical position grounded on mental assumption that all knowledge comes from and learning. this position cannot be completely as the evidence points out to some degree of predisposition for some kinds of behaviour.

A middle path where in we suggest that heredity ronment interact together to produce the behaviour.

Perspectives In Ψ / School of thoughts



~~21st century gave rise to various emerging perspectives~~ with interdisciplinary character.

1879 ~ period would be refferd to as Historical antecedents.

Modern sc. Ψ perspective / School of Ψ

prescientific Ψ period is when psychology was taught to be detached from philosophy.

It was influenced by physics and physiology and moved a step forward, in becoming a scientific branch.

First such initiative was taken by wundt, when he set up the first Ψ laboratory @ Leipzig in 1879.

these movements have been favoured by technological advancement.

Inventions such as computers influenced such/catalysed the development.

Structuralism, structure of consciousness. Wilhelm. wundt
↓
Functionalism, functions of consciousness William James, Dewey
(1890s) (Psychoanalysis) ↓ Carr,
Behaviourism, study of behaviour, watson, skinner,
(1913) U.S (R-S Ψ) ↓

- Neo-behaviourist, said that R-S is very limited and introduced the idea of mentalistic concept; Tolman
- Cognitive Psychology Cognitivism. Pt changed S-R approach to $\boxed{S-O-R}$ (organism)

Organism- Agarismic → interpretation of the stimulus handles the response not the stimulus alone

Individuals understanding, information processing differs. that why cognitivists added 'O' (information processing capacity of the individual to the S - R concept.

It was around 1950's : Rotter, Bandura, Neisser

Humanism (1950's) → continue till date.

~~Biological (1950's).~~

Around 1912. in Germany they started a movement called 'Gestalt'

Gestalt school of Ψ ran till 1940's even it disappeared.

Father figure Wertheimer.

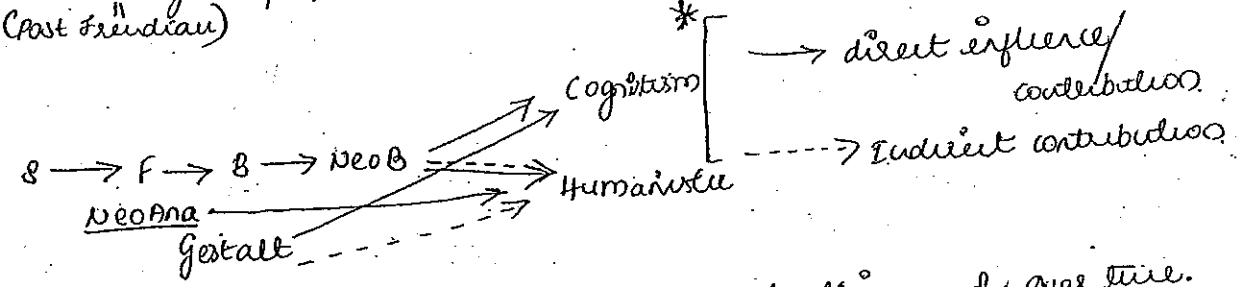
But it favoured / stimulated the growth of neo behaviourism, cognitivism and vaguely to Humanistic approach also by giving the concept of molar approach.

1890 - Psychoanalysis - Freudian school

A variant of Freudian school → neoanalytical (1950's)

Both psychoanalytic and neoanalytical perpetuate both exist even today.

Neo-analytic people also contributed to the growth of Humanistics. (Post Freudian)



Gestalt showed light to other schools and disappeared over time.

So, Psychoanalytical, Behaviourism & Humanistic] 3 forces in Ψ, relevant even today.

4th force could be cognitivism, yet not accepted.

Supporting → Biological perspective

all three forces come together to form. Today's modern disciplines Interdisciplinary branches

Structuralism :

Wilhelm B. Wundt, regarded as father of psychology.

was the founder of structuralism.

Subject matter of the discipline was 'consciousness'.

Structure of consciousness & immediate mental experiences through an atomistic approach. based on the principles of reductionism.

atomic conscious experiences can be reduced to

1. Sensations
2. Feelings / Affects / Emotions
3. Images

IAS

Images refers to experiences which are not present right out of us.

To study these conscious experiences Wundt experienced a psychological lab, (using principles of reductionism)

he deployed the method of Introspection to break conscious experience into smaller units.

Introspection : Looking into self – present.

Retrospection : Looking into past deeds.

- Highly subjective & humanly impossible
- Past influences present which can't be helped.
- observer had to multitask observe & note down simultaneously which was actually a difficult task.

feelings should be reported there and then & recorded otherwise it will become retrospection.

wundt's idea was good but methodology had lots of flaws.

Because feelings and sensation don't go together meaning to say it is difficult to do both at the same time.

Elementalism = Atomism.

But his contribution should be considered because, It initiated the first step/ helped in making Psa science subject.

Basically the S-O-R approach was invented by structuralists but

S → organism → R, but it got lost in between
(Consciousness)

again it was rediscovered by neobehaviourists & cognitivists.

Introspection was the method used by wundt to study the elements of conscious experience in an analytical and objective manner. introspection required subjects to consider and report their own mental processes as they experienced a particular event. the method of introspection proved to be inadequate largely because of the conflicting findings between people doing introspection, in difficult tasks. Introspective methods therefore proved to be a failure as they failed to provide a coherent and generally accepted account of human mental ability.

Functionalism :

Subject matter was functioning of consciousness. (Purposes)
Function is to ensure the individual's survival by continuously adapting to his environment.

- William James gave this definition. In functionalism, influenced by Darwin's theory of Natural selection.

thus by defining functions, Functionalists have provided applied orientation

→ the school of functionalism provided psychology an applied orientation by attempting to apply research findings to solve practical problems.

The first intelligence test was for use with children was developed by functionalists thus functionist expanded the scope of psychology. their method of investigation however continued to be introspection though they occasionally did encourage the method of experimentation.

Behaviourism

roots could be traced back to,

1. Association : Thorndike
   : Pavlov
2. Frustration against structuralism particularly their method of introspection

Watson – Father of Behaviorism

Skinner – prime contributor

Why not pavlov?

He merely showed how S-R relationship happens and gave us classical conditioning, yet not the father of Behaviorism. Watson using Pavlovian principles demonstrated how a behaviour can be introduced & / & vanished in an individual.

→ Behaviorism is rooted in the idea that manipulable determinants of human behaviour lie outside the human beings in their environment. and therefore behaviours can be introduced or eliminated and even reintroduced through the manipulation of environmental contingencies.

Behaviorists rejected mind & consciousness as the subject matter of Psychology and emphasized that psychology should be concerned with the study of behaviour which they described as objectively observable actions performed by the individuals.

In his influential paper "Psychology as the behaviorist views it" in 1913 Watson attacked the structuralistic impact on consciousness and mental experience and rejected the views use of method of introspection to study these experiences. instead he insisted that the study of behaviour should be the subject matter of Psychology and it should be done through experimental method.

Behaviourists for their objective equally favoured the molecular approach as they believed, however complex a piece of behaviour might be it was possible to break it

down into Stimulus - Response (SR) units for detailed analysis.
much of their research was carried out on the animals rather than human beings because ① animals were easily available
② Greater control could be exercised over their environment.
and also because they believed that human and animals are related both physiologically as well as behaviourally.

① Subject matter → behaviours
② Subjects in study → Animals
③ method of study → experimental primarily.
④ fundamental premise → Environmental determinism.
⑤ Approach → Molecular
⑥ objective → definite cause-effect relationship.

fell out of favour beior of the obsolute orientation/approach.

+ve's

⊙ Highly practical approach
⊙ Introduced scientific rigor in Ψ

-ve's

⊙ failed to explain complex human behaviours
eg: Altruism, love
⊙ Generalisation of the findings from animals to human beings.
⊙ Completely rejected mentalistic concept
⊙ Neglected the role played by biological factors as well as individuals' will in behaviour. (will = volition)

Neo behaviorism :

Incepted from behaviorism with an objective to undo the limitations that had constrained the scope of Behaviourism.

Neo-behaviorists - Tolman, Albert Bandura,

Neo behaviorists favoured S-S approach unlike behaviourist who said its S-R

(S — S) (sign-sign)

Yes the acceptance of presence of cognitive maps. at the same time it also meant the admission of mentalistic concepts

Learning according to behaviorists involves building up of S → R association through association where as learning according to neo behaviorists involves building up of S-S connections. In the cognitive map.

association is established in fewer trials and without the presentation of Reinforcement unlike behaviourists.

According to neo-behaviorists as behaviour can be established/ introduced even with verbal instructions/suggestions alone.

this idea was out of the ambience w.r.t Behaviorists.

Neo-behaviorists emphasized in learning with little effort. and in fewer trials.

Signs are stored in ~~cognitive~~ Brain in the form of cognitive maps. (In a sense they meant to say, 'O' in S-O-R of structuralism back in the equation S-R.

So by this neo-behaviorism 'O' comes back in the equation of S-R in the form of cognitive maps operated in the mind of the individual.

∴ Here people behaviour is purposive.

Psychodynamic & Psychoanalytical perspective.

Freud → Founder of school of Psychoanalysis,

⊙ Has its basis in psychic determinism

⊙ states that human behaviour is driven by unconscious things outside the ambience of conscious and awarren constants unconscious.

There are three corner stones in his theory

1. Id → pleasure principle
2. Ego → Balance three two forces ↕ Balance
3. Super Ego ("Atman") Ethics and values morality principle.

an individual with a matured Ego → will be a balanced person.

↳ rightly meets the demands of reality.

and strike a balance between (Ego and) superEgo & Id

when Ego cannot balance, it tries to escape this mechanism are called as defense mechanisms. like projection, denial,

In a long term defense mechanisms become a habit distorting the reality.

Frame of reference should be as close as possible to reality so that we don't have such attitudes which are potential enough to distort us.

pragmatism ✓ Utopia X.

Reasons for immature Ego could be, fixation in early childhood.

Healthy personality = mature Ego

(part) fixation fewer.

Unconscious impulses ↓ powerfull

unhealthy personality — compell Ego to use defense mechanisms.

Consciousness has been given top of the iceberg status in psychoanalytical theory.

defense mechanisms involves distortion of Reality.

Unconscious id impulses pushes Ego. we don't have any control over such Impulses. Yet every behaviour has a reason/cause.

It had a tremendous influence on it.

@ the same time the limitations of psychoanalytical theory gave rise to neo-analytical / Neo Freudians.

Only therapist can lead an individual to unconscious According to this school.

Becoz, It is determinitic in nature, so the question of introspecting self is ruledout.

they say "I can't change myself"

Freudian approach to treatment is directive, therapist centred. ~~unlike Rogerians whose approach is rather indirective, &~~ client centred. who believe in freewill.

Besides a collaborative approach is followed by cognitive psychologists who believe that both client and therapists should work together to bring about a change in the behaviour of the client.

(Structuralist)

- S-O-R → 'O' conscious/subjective

(Behavr) S-R (⊗ - leads to subjectivism) (Experimental method) (molecular) (/practical)

(cognitive) S-O-R ('O' organism) } S'O'R (individual - cognitive maps).
(neo-behvr) S-S (neo-behr) } S-'O'-R (organism)

---

more expert centred the treatment becomes ↓popular it becomes among common people.

Freud - followed case study analysis hence he couldn't arrive at scientific conclusions (general laws) as behaviourists did with Experimental method.

Freudian - Idiographic method for analysis.

precisely related explaining normality by defining abnormality which first make sense.

Freudian & sub cores of Heuristic Impact (Research)

and lead to division on the grounds of disagreements like

Neo Freudians [Eg & Horney
Non Freudians [Eg & Sullivan
Eg: Adler, Carl Jung
Ego analysts.
Eg: Erikson, Anna Freud.

Non Freudians.

Non Freudians are those people who started as disciples of Freud but later seperated and established their own school of thought independent of Freudian school Eg: Horney, Adler, Carl Jung

Neo Freudians

started as disciples of Freud and continued to accept some of the basic principles of Freudian psychology but they brought about some modifications in Freudian theory in order to restore its relevance in contemporary light.

Eg: Horney, Sullivan [Sullivan: Interpersonal focus; Horney → cultural focus; Freud.]

Ego analysts:

who could also be named as neo Freudians but called so because they proposed an idea of a personality theory which was Ego focused unlike Freud's which was Id focused.

Freud considered Ego to be the servant of Id, and hence his Ψ is Id based Ψ

Ego analysts emphasised on Ego being independent of Id and said Ego is the prime factor behind most behaviours.

i.e our behaviour is guided by consciousness rather than unconscious, they weren't ready to accept instinctual's role played in determining a behaviour.

Ego → conscious → culture (socialisation)
transmission of culture

Horney & others and Erikson & company emphasised on cultural perspective which is not seen in Freudians.

Psychodynamic perspective is a school of thought united by a common concern with the dynamics or interactions of the forces lying deep within the mind, different psychodynamic theorists emphasize different aspects of mental dynamics but almost all agree on three basic principles,

(1). Psychic determinism, which implies that much of our behaviour is not freely chosen but on the contrary is determined by the nature and strength of these psychic forces.

(2). The belief that such forces operate for most part unconsciously in other words, the true motive of behaviour is unknown to us.

(3) most psychodynamic thinkers feel that the forces take is deeply influenced by childhood experiences particularly relationship within the family.

The psychodynamic perspective is by no means founded by Freudian theory. It is a large and living school of thought built of proposals and counterproposals contributed by many theorists.

Culture ↗ text ↘ context culture doesn't transmit moral values alone

there is a conflict between text & context always leaving an individual confused @ crossroads.

Psychoanalytical

Freudian approach to P coas the result of his efforts to treat mental disorders, his work with his patients and his own self exploration persuaded him of the existence of unconscious mind which emerged as the corner stone of his theory named as psychoanalytical theory.

According to Freud unconscious contains thoughts, memories and desires which are much below the surface of conscious awareness but nonetheless exert a great influence on behaviour.

Psychoanalytical theory attempts to explain personality motivation and mental disorders by focusing upon the unconscious determinants of behaviour. Freud theorized that many unconscious thoughts are threatening which causes them to be repressed and even when repressed they press the person for their release thus putting the person under great tension.

Behaviour according to Freud is the product of interplay between three personality components namely:
- Id
- Ego
- Superego

Freud believed that people develop through 5 stages and each stage is marked by a developmental conflict. Failure to receive appropriate amount of gratification in any of these stages may result in fixation. with the individual tending to regress to an earlier stage in order to resolve the issues that were not resolved at that time.

Criticism of the approach:

① Highly deterministic theory that takes a pessimistic view of man (sex & aggression, basic nature, doesn't consider man to be growth oriented)

② underplayed the importance of conscious factors in the development of behaviour and personality

③ His clinical case study method unsupported by quantitative data for statistical analysis makes his theory vague and difficult to verify. The study of limited sample of adults reduces the scope of generalization of his findings.

Humanistic Approach

⊙ Free will, optimistic view of man

⊙ growth and self actualization, psychological growth is centrics

Some people cannot reach self actualization, growth stops because of the faulty experiences in life. because everyone at one or other point in life ~~victim of conditional posture~~ regard

studying the individual from his viewpoint. also called as phenomenological

⊙ approach is based on optimistic model, - believing that man is capable of growth and self actualization.

⊙ Essence of individual's personality lies in 'self' (who am I?)

⊙ subjective self (conscious)

⊙ objective/material self (unconscious part)

Emphasis on uniqueness of the individual.

So the approach is "molar approach"

man is more than sum of his parts.

Both Freudian & Behaviourists correct stone is

Homeostasis → Hedonism (H-H)

Unlike them, Humanists. Free will exists.

Real self → what you are

Ideal self → what you want to be, demand for ideal self makes individual developed "conditions of worth"

Based on the idea of qualitative psychology & 'insight'

this is the similarity between Freudians and Humanists

Stimulus - something outside the individual (in environment) which evokes a response inside.

this concept is extended, where stimuli also refers to mental like stimuli as well thus this holds good for Humanistic & cognitivists.

the H-H excludes all 4 schools Freud, Behavr, Humanistics & cognitivists.

Otherwise H-H only accounts for Indian & Behaviour.

Humanistic approach emerged as a result of frustration felt against highly deterministic approaches of behaviourism and psychoanalysis respectively. Humanism introduced into psychology a view of human being as a free and generous individual with the potential for growth and fulfillment.

Humanistic psychologists believe that Ψ should be concerned with the subjective conscious experience of the individual. They emphasise the uniqueness of human beings and their freedom to choose their own destiny. They regard the use of scientific methods as inappropriate for the study of human beings.

A major aim of Psychology they believe should be help people maximize their potential for psychological growth.

The humanistic view is optimistic, human beings are seen as striving to achieve their potential that is to achieve maximum personal growth within individual limitations.

Two leading exponents of humanistic approach are Carl Rogers and Abraham Maslow.

Carl Rogers was a clinical psychologists and like friend developed many of his views through his work with emotionally troubled people. Roger's theory of human personality started with the premise that each individual is unique and has a basic need for the regard that is to have respect and admiration from others.

Rogers believed that people are born with an actualizing tendency, a motive which drives them to grow and develop into mentally human beings. Central to Rogerian theory is the concept of the 'self'.

Self according to Rogers has two components,

- perceived / Real self
- Ideal self.

Good [illegible] Exists, where perceived and Ideal self are relatively compatable and where there is a serious mis [illegible] problems arrive.

Rogers developed client-centred therapy to help individuals arrive at a congruence between their perceived and ideal self.

Maslow believed that self awareness and the ability to come to terms with oneself are necessary ingredients for psychological wellbeing. Like Rogers he believed, that human beings strive to ~~achieve their potential that is to achieve the maximum amount of~~ personal growth possible within their individual limitations.

However Rogers emphasized on the importance of selfconcept, Maslow was concerned with motives that drive people

He gave need hierarchy theory which is based on the assumption that until and unless lower order needs are met higher order needs donot emerge. and once the lower order needs have been met they are no longer motivating.

Maslow believed that there are two kinds of motivation

① Defeciency motivation, which include the need to reduce physiological tension such as hunger, thirst etc

② Growth motivation, which has to do with the satisfaction of needs such as the need to be loved and esteemed. Growth motives operate on the principle that when no deficiency remains people have the need to develop beyond their present condition.

Critical Evaluation

tve's

Humanistics have forced psychologists to take account of subjective experiences of an individual and the importance of self esteem in Psychological functioning. (phenomenology)

It has introduced into psychology the concept of freewill and the idea that human nature is positive and growth oriented.

Event becomes phenomenon when it is given subjective touch.

-ve

① Their discription of human behaviour is full of poorly defined concepts which lacks scientific validity.

② (Rogerians) (approach) Humanistic approach has a weak practical bias. Eg: the client centered therapy advocated by Rogers is applicable only to the treatment of people with mild emotional problems.

③ There are some Psychologists who have criticized humanistic approach because it places too much of emphasis on the well being of an individual at the expense of the concern for the welfare of others.

GESTALT

The term Gestalt means whole or configuration and gestalt psychologists operate on the idea that whole is more than some of its parts.

Gestalt Ψ emerged as a revolt against structuralism. ~~but once it gained momentum it took up arms against behaviourism. Gestalt school was against the reductionist~~ analysis of theories of both behaviours as well as structuralism. Gestalt psychology developed in Germany at the time when behaviours making waves in U.S.A.

The leading proponents of Gestalt Ψ were, wertheimer (Father of gestalt Ψ) Kohler, koffka

phi phenomenon demonstrated by wertheimer, states " whole is more than sum of its parts"

Wertheimer produced an early demonstration of the wholistic approach through his experiments on apparent movements which he termed as phi phenomenon. He showed that when two lights were presented a small distance apart and then switched on and off in an alternate manner at the certain time intervals, a person reported seeing not two lights being lit one after another but infact a single light moving from one point to another.

Pragnanz.

Field view:

machine view was given by Behaviourists,

contrasting to that Gestalts gave field view.

It is nothing but perceivers view of Reality.

idea of phenomenal field was first introduced by gestalts.

mechine has exactness, accuracy in it.

But field view is not exactly accurate, it is sufficiently accurate.

Isomorphism

The information that we store in our mind is not exactly the same as that of the stimuli, but it is more or less the same image / representation of the stimuli.

Our estimation / representation of stimuli is not an exact replica of the stimuli its approximate, more or less the same.

In contrast to the machine view advocated by behaviourists gestalt psychologists have an ~~habit of referring~~ to the perceiver's view of reality which they called as field view.

Isomorphism was the principle given by gestaltists to suggest that there is no one to one relationship between stimuli and the percept, but the form of experience corresponds to the form or configuration of the stimulus pattern.

Gestaltists see the representation of the physical world and not the photographic copies of it.

Kohler investigated the problem solving in apes. and found that the animal perceived the problem situation as a whole, formed the hypothesis about its solutions and responded appropriately, he called this learning as Insightful learning. Unlike behaviourists who believed that learning and problem solving involved the establishmet of S → R connections and occurs through trial and error method, gestaltists believed that hypothesis testing happens to be at the core of learning and problem solving. effort and most learning can be accomplished in one or few trials.

Behaviourists → S – R

Incremental
slow
gradual
steady

} Each involves practice

when it comes to learning,
Early stages of life (Psychomotor activities) involves trial and error method whereas later in life, we follow Hypothesis method proposed by gestaltis as more quick learning takes place through hypothesis method.
We hold hypothesis, and revise them from time to time.
Eg: Blacks are cognitively less efficient than whites.
Is just a hypothesis. which is checked, experienced to see whether its correct or incorrect.
Hypothesis testing rests on the principle of,

All or none

S-R is incremental.

as a child → S R learning
as an adult → Hypothesis method.
Once the cognitive maturity is attained.

Critical Evaluation :

+ve

① Popularised the molar approach in Ψ
② The principles of organisation given by Gestaltists find acceptance universally among Ψgits.
③ Gestalt Psychologists enlightened us about field view and demonstrated its superiority over machine view given by behaviourists.

-ve

① The tendency of gestalt psychologists to rely for their data on subjective observation and report of courious experiments rather than carefully controlled behavioural methods has attracted criticism from behaviourists.
② Gestalt principles of organisation lack the neurological support

Cognitive approach.

Mediater.

S — O — R

(m)

Information processing device
thinking mechanic.

Information processing device:

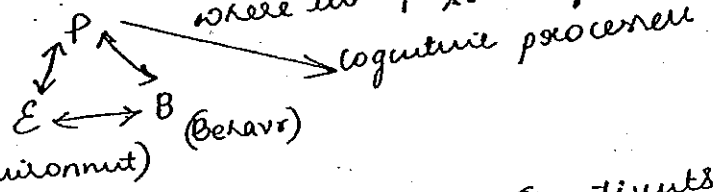
~~It nothing but~~ symbol or manipulation.

'O' contains cognitive maps, which comes from experiences, our world view develops grows continuously.

Cognitivin rejects the idea of determinism.

It is reciprocal determinism

Bandura spoke about triadic reciprocal behaviour which states,



while reintroduced the 'O' in S-R relationship, Cognitivists increased the range of behaviour that are included.

advance learning involves manipulation of symbols.

(Sign-gestalt) →

They emphasized only on information processing, cognitive maps and so on..... but they completely neglected "Emotions"

Cognitive Psych were basically inspired by Behaviourists

So they can't say anything about emotions.

this is one of the criticism cognitivists face.

Humanists raised the voice against this.

thoughts ⟷ Emotions

Influence

Still, cognitivists have tremendous importance in contemporary world.

Cognitive psychologists believe that the events occuring in the person must be studied if the behaviour should be fully understood. these internal events are refered as mediators since they occur between stimulus and response and include process like perception, thinking, memory problem solving etc. ~~Unlike psychoanalysis~~ and behaviourism

Cognitive approach doesnot represent a single body of knowledge and there is no single theorist that has predominated it the ways freud influences psychoanalysis and skinner influenced Behaviourism it must however be said that the common theme in the approach of all cognitive theorists is the study of mental processes as they are believed to influence our behaviour and are considered to play an important role in our adjustment in our environment. the processes donot operate randomly but in an organised and systematic manner. The human mind is compared to that of computer and the human beings are seen as ~~information~~ information processing units that recieve information from the outside world provide it a code store it and when the need be retrieve it. Though the mental processes studied by cognitive psychologists are not directly observable and therefore incorporate some scope for subjectivity but it is the endeavour of the cognitive psychologists to be as objective as possible in the study of mental events.

Criticisms

-ve / +ve ① Cognitive approach lacks coherent appeal as it is the result of the contributions from many different theorists.

② The information processing metaphor drawn from computing and emphasising man as a machine has offended many psychologists.

they point out that the computer analogy fails to recognise the most fundamental differences between human beings and machines

eg: people forget but machines do not. where as people can be emotional and irrational at times, machines are always logical. and do not percieve/feel any emotion.

Biological Approach

Psychologists who take biological approach look into physiology as the means for describing and explaining psychological functioning. Our behaviour is assumed to be linked to our physiological make up and genetic predispositon.

Biological psychologists are interested in wide range of phenomenone and ~~times~~, ~~research~~ has developed rapidly over recent years into functions of nervous system and hormonal system and how these too systems interact and influence behaviour and mental activities.

Some of the questions that have been examined by scientists during the course of their research are,

(1) what activities occur in nerve cells of the brain (exist) (causes us to) and sense organs when we perceive patterns or colours.

(2) To what extent that the brain function as a single unit and to what extent distinct collection of parts with its own particular function.

(3) what activities occur in the brain during diffrt states of consiousness

(4) what are the links between hormonal system and aggression, hormonal system and emotions; and hormonal system and sex differences in behaviour.

5. what physiological mechanisms underlie motivation.

6. what changes take place in the nervous system when the memory has been established / something has been learnd.

There Another aspect of biological approach relates to the role of heridity in behaviour and associated with it e.g. the investigation of the relative importance of

Heredity and environment in the development of psychological characteristics (Nature Vs Nurture debate)

There are some scientists who believe that all psychological phenomena can be explained by reference to the physiological activity particularly the brain processes. This philosophical view point has been termed as reductionism. In Biological approach it implies that to understand the psychological functioning we must analyse these functions in the form of even smaller units of analysis such as nerve activity, muscle movement etc.

Research findings in Biological approach.

① In 1986 Broca identified that the patient's inability to speak resulted from a defect from in a specific area of the brain this evidence of localization of brain function contributed to the gradually emerging view that behaviour has physical basis.

② In 1920, Carl Lashley carried out a series of experiments in which he demonstrated that learning and memory in rats is impaired if a part of cortex (is) brain bark is removed. He further demonstrated that the amount of the brain tissue destroyed appears to be more important to the animals behaviour than the specific part of the brain involved. Lashley believed that all parts of the brain are probably involved in every action and this he called as law of mass action & Equipotency.

③. Olds and Milner proved through the procedure called as ESB (Electrical Stimulation of Brain) identified pleasure centers in the brains of rats.

Hans Selye came up with the concept of GAS (General adaptation syndrome) which described the hormonal, biochemical and other bodily changes which occur and which interact with Psychological factors within the individual during the experience of stress.

Stress is a stimulus, Response and also a transaction between stimuli and response.

Stress as a response — cognitivists

Stress as a stimuli — Behaviourists

Stress is a classic example of how physiology and psychology influence each other?

physiological factors ⟷ Psychological stress

Critical approach:

① physiological approach favoured the reductionists explanation and over emphasized the physiological links with the behaviour. This implied that the approach could provide only one dimensional understanding of various psychological phenomena.

② The physiological approach is not yet sufficiently advanced to offer complete explanation for psychological phenomena like memory, Emotions, learning, and so on

Moreover the complexity of the biological system and the countless environmental influences that effected makes it difficult to predict behaviour on purely physiological terms.

21st century Trends

* **Multicultural approach**

appreciating the diversity

We are moving from

melting pot approach → Tossed salad approach.

Anthropological view: 'Assimilation' → 'Integration'

become one no independent identity is retained loose ethnic identity join mainstream	we have independent identity but still in mainstream retain ethnic identity.

From sociology point of view its not really clear ethnic identity becomes ethnicity.

But practically speaking, integration approach seems difficult, elusive and Utopia than assimilation.

* **Interdisciplinary simulation & eclectic approach.**
* Technological intervention.
* Positive Psychology. now the focus is on 'well being' elimination of symptoms is no more the corner stone.
* Scope ↑

21st century has seen remarkable changes in the way the realm of Psychology has expanded to reach each and every sphere of life. Among the changes that have occured,

1. the spectrum of traditional areas where the interventions of Ψ were already existing have been diversified particularly as a result of the operation of forces like globalisation, privatization, liberalisation etc.

Almost in every traditional discipline of Ψ like for example Educational Ψ abnormal Ψ etc changes have occured.

The execution of Ψ theories and approaches have been extended to other unexplored areas.

3. There have been new emerging fields demanding proper psychological approach such as community Ψ, rehabilitation Ψ gender Ψ, sports Ψ, cyber Ψ etc.

Researchers in other disciplines have joined hands with psychologists to establish new approaches to study psychological phenomenon, there new areas and inter disciplinary approaches have gained considerable momentum since the start of 21st century. and promises to be actively percieved in next 5 decades or so. Of particular interest among the various new trends that have emerged are,

1. Cognitive science
2. Cognitive neuroscience.
3. Evolutionary Psychology
4. Cultural psychology
5. positive Psychology.

These are the areas where advanced research is being done to analyze and interpret human behaviour in its totality.

Cognitive science.

why cognitive Ψ became most important
couple of things have contributed to this,

1. Artificial intelligence.
development in information technology.

Cognitive science — computer science + cognitive Ψ.
where as cognitive Ψ has its major contributes from Ψ.
cybernetics — Science of computing & control → Feedback.

Cognitive science is an interdisciplinary branch of study that is based on the idea that human cognitive system can be understood as if it was a point computer engaged in complex calculations. Just as complex computer calculations can be broken down into a set of simpler calculations such as storing, retrieving and comparing symbols or representations likewise actions of human beings can be broken down into a set of elementary mental components - these components also involve storing, retrieving and comparing symbols.

There is a further parallel between computer calculations and mental calculations. A computer activity may be analyzed at different levels including the level of hardware with its emphasis on chips and at the level of representation and algorithms with its emphasis on data structure and processes. (Heuristics → donot guarantee success, mere probabilities, guess) likewise cognitive activity may also be analysed at the level of hardware of neuron and at the level of mental representations and processes.

The idea of mental computation and the level of analysis are among the other stones of cognitive science.

Cognitive neuroscience

It addresses the question, how psychological and cognitive functions are produced by neural circuitry. Cognitive neuroscience is a branch of both psychology and neuroscience unifying an overlapping with several sub disciplines such as cognitive Ψ, neurobiology etc. Cognitive neuroscience focuses upon cognitive process and relies heavily on the methods and the findings of the neuroscience.

The main objective of this is to advance our understanding regarding the way mental activities are executed in the brain. The distinctive feature of cognitive neuroscience is its reliance of new technologies for studying the brain of normal participants'

as opposed to the "brain damaged ones".
while performing a cognitive task the neuro imaging or the brain scanning techniques create visual images of brain in action with an indicator of which region of brain structure displays more neural activity while performing a particular task.

Eg: Smith et.all found that when students are asked to ~~remember information for a long period~~ neuroimaging results show an increase in activity in the region closer to the middle brain. whereas when asked to remember information for a brief period (say for few seconds) neuroimaging shows an increase in neural activity in the frontal regions of the brain thus advancement in neural science has informed us that different brain areas seem to be used when the information is stored for a short term and for long -term.

The relationship between P and neuroscience is not just limited to cognitive neuroscience, new areas like affective neuroscience has come up and it aims to study how emotional phenomena are executed in brain.

another interesting development is social cognitive neuroscience, which aims to discover how stereotyping person perception, attitude formation and change and self knowledge are executed in brain.

Evolutionary Psychology. [criticism - basically reductionistic approach
Everything can't be explained at genetic level]

It is concerned with biological origins of P cal mechanisms. it visualizes much of human behaviour as having foundation in psychological adaptation that evolved to solve recurrent problems in human ancestral environment

eg: females are superior to men when it comes to non-verbal communication.

Every gene produces/expresses its result only when it comes in interaction with the environment.

Evolutionary psychology is a branch of psychology that suggests that as a result of evolution human beings possess many evolved psychological mechanisms that help them to deal with important problems relating to survival. They hypothesized ~~for example that human beings~~ have inherited spatial mental capacity for acquiring speed, making it nearly automatic why inherity no such capacity for reading and writing.

eg: Training a child for writing & reading is needed where as child learns to speak on its own.

man's vocal system → Can be expanded and is productive unlike other animals.

Other adaptations include the ability to read others emotions, to identify kin from non-kin, to identify and select better mates to reciprocate help and so on.

In addition to Ψ and biology other disciplines that have contributed to the rise of evolutionary perspective include anthropology and psychiatry. Evolutionary Ψ leaves that Ψcal mechanisms have evolved a millions of years through the process of natural selection this implies that these mechanisms have genetic basis and have proved useful in the past in increasing the organism's chances of survival and reproduction. To illustrate we can consider our likings for sweets such other reference can be thought of as a Ψcal mechanism and it has a genetic basis.

We have this preference because it increased our ancestor's chances of survival, one first that tasted the sweetest had the highest reproductive value. So by eating it they increased the chances of continued survival of the relevant gene.

obesity could also be explained from Ψ cod point of view that, it enables us to survive in the starvation.

Sociobiology

Is concerned with biological basis of social behaviour, it does this by applying evolutionary biology in an attempt to explain social behaviour. In other words we act the way we do towards each other because we have evolved that way. & we have evolved that way becoz of natural selection in the terms of survival and reproduction.

Traditionally sociobiology has concerned itself mostly with non human animals and has dealt with behaviours such as mating, aggression, and so on. more recently they have turned their attention towards the study of the similar behaviours in human beings as well. and this has provided impetus to the growth of evolutionary psychology.

Positive Psychology.

like how Humanistic school emerged as a result of reactionary approach against Freud & behaviours, positive Ψ emerged opposing the ideas of abnormal Ψ. doesnot search for causality (what caused it?)

Goal are, is to maximize the happiness.

Quantitative in nature unlike Humanists which is basically Qualitative (Case studies).

The idea that 'Removal of pain is happiness is totally rejected here.

After world war II, Ψ became a science devoted to healing it adopted the disease model of human functioning from medical sciences and aimed to cure pathologies. this found produced tremendous advances in the field of understanding and

treatment of mental illnesses. but unfortunately psychology during that time had very little to say about what makes the life worth living. positive psychology emerged to balance the field of sophisticated understanding of mental illnesses. with equally sophisticated and scientific understanding of human flourishing

~~the ψ started with~~ humanistic ψ a concern with people's development towards ~~realization of their full potential but it~~ departs from humanistic ψ by relying heavily on empirical methods. the ψ targets psychological phenomena at the levels ranging from the study of subjective experiences such as happiness and optimism to the study of positive personality traits such as courage and wisdom. and also the study of institutions and social structures that cultivate civility and responsible citizenship.

the focus is on the study of positive emotions so that the factors responsible for happiness dispositions can be identified. the attempts to study positive emotions is also undertaken with the intention of broadening people's world view and encouraging their creative and exploratory behaviours. Empirical studies have also supported the idea that +ve emotions facilitate broad thinking and they lead to the development of +ve personality traits such as resilience, courage etc.

The take home message of the ψ is that +ve Emotions are worth cultivating not only as the end states in themselves but also as the means for triggering final growth.

Why all -ve Emotions more dominant than +ve emotions?

→ Survival, (greater chance to learn),

there are more models for +ve Emotions

Requirement are more for -ve emotions

more members are demonstrably -ve emotions than +ve emotions. besides they also helps in growth and adaptation, + environment also (quite rightly) facilitates such emergence of -ve emotions.

Eg: fear appeal is used more than a +ve appeal like love & care.

Cultural Psychology.

western culture — Oriental culture.

Eg: oedipus complex & electra complex.

Addictions to substance is less prevalent over here, so the reason could be because of our familial bonding and we find here which is not seen in west.

→ Scientific Ψ in west has often assumed that people in all cultures have exactly same Ψ cal processes. increasingly this assumption is being challenged by proponents of cultural Ψ which is an interdisciplinary movement involving Ψgists, anthropologists, sociologists and other social scientists. Cultural psychology is concerned with how the culture in which the individual lives influences the person's mental representations and psychological processes. the growing importance of cultural Ψ can be seen in the form of the emergence of multicultural perspective. In last century there was little recognition & appreciation of the importance of diversity. infact there was little recognition of & interest in possible differences between males and females. the prevailing view point was that if cultural and gender differences exists they are relatively unimportant. the ignorance regarding diversity was guided more by the understanding that Ψ being a science should be concerned with developing laws and principles that apply to all human beings regardless of where they live [illegible] background & cultural identity.

this thinking now has been reversed as Psych recognised that such differences are crucial to the understanding of human behaviours and this is the reason why psychologists have adopted a multicultural perspective in their study of behaviour: this perspective is demonstrated not only in research but also in guidelines followed in providing psychological services such as counselling to ethically and culturally diverse populations. These guidelines require that psychologists recognise cultural diversity and take a full account of it in all their activities for example, psychologists must provide their clients, information in the form and in the language that their clients understand.

Cultural Ψ derives its problems and procedures from an analysis of the nature of culture with an important focus on everyday life. cultural Ψ is distinct from cross cultural psychology in that the cross cultural psychologist studies the culture (phenomenon) generally as a means of testing the universality of psychological processes rather than determining how cultural practices shape the psychological processes. Thus cross cultural psychology has universalistic bias, the goal of cross cultural psychology is to separate the universal from culture specific with respect to human behaviour where as in cultural Ψ the culture is seen as inside the individual. it tries to study how cultural practices in a given culture influences the attitudes, values occupational goals and thought process of the people of that culture.

Piaget (Pyage pronounced as), Psychologist who gave the theory of cognitive development.

gave diff stages of development

1. Sensory motor
2. Preoperational
3. Concrete operational
4. Formal operational.

study cognitions in a given culture — cultural Psy
compare it across cultures — cross cultural Psy

When as a cross cultural Psy might ask whether piget's stages of development are universal across the variety of culture a, cultural Psychologist is interested in knowing how the social practices of a particular culture influence the development of cognitive processes.

Western society/ culture → Independent → Individualistic → Behaviour (attitudes, values, and judgment)
I, My, mine, failure Externalized

Eastern society/ culture. → Interdependent → Collectivistic → behaviour (attitude, and judgment values)
(Relation self)
we, ours, us.
Failure Externalizing.

Impact of globalization, liberalisation, IT, free market economy and democracy on Behaviour

What has it led to ↑ Global Unification Or Global clash ?

- Tolerance for diversity has increased
- world is shrinking into a global village.
- Global identity. ↑ chance of realization of potentials.
- due to dissemination of free flow of information

By change involves,

Unfreezing — Existing attitude fall away
Moving — new attitudes come in & brings about uncertainity.
Refreezing — new attitudes gets stabalised.

-negative

- ↑ insecurity in people
- disequilibrium. which is inevitable. for any change to happen

→ On one hand an increasingly interconnected society has been created and the people from different cultural origins are drawn into close relationships with the elimination of trade barriers, travel restrictions, spread of MNC's, internet communication and this has led to Globalization of human culture. There has been denimination of pop culture.

The psychological values of tolerance and openness has become essential in peoples (life) lives. Globalisation has influenced peoples individuality and the way they think about themselves and their social environment. most people in the world have developed a bi-cultural identity that is the part of their identity is based on the local customs, norms and beliefs while other part is rooted in the global culture. this has caused identity confusion in most people specially those in nonwestern societies.

Fundamentalist ideas have also gained strength because globalization is resulting to end limitless power of local authorities either political or religious. As the traditional authorities are reluctant to dispense with the power therefore they have tried to adopt a fundamentalist position wherein the attempt has been to propogate local customs traditional ~~etc and provide them a~~ sacrosanct status so that they can continue to remain in power.

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text and context., when the continuity ends disequilibrium.

Historical Antecedents

Hippocrates was the first person to speak about psy

next comes socrates → plato → Aristotle → Descartes (famous: Deca)

→ August comte → Locke Berkeley Hume, Hartley

→ James mill & J.S. Mill → Leibnitz & Emmanuel Kant

→ Fechner Helmholtz and weber → wundt.

In terms of Ideologies,

- Animism (soul) Eg Hippocrates, socrates, plato, Aristotle
- ↓
- Mechanism (descartes,)
- ↓
- Positivism (comte,
- ↓
- Empiricism
- ↓
- Associationism
- ↓
- Psychophysics
- ↓
- Lab (wundt)

Descartes : Idea of interaction between body & mind

body ⟷ mind } 'Interactive Dualism'.

this interaction could be Antagonistic & cooperative.

positivism given by comte was an important step towards

& becoming scientific.

Empiricism :- Everything is experiential.

Associationism : Concept of S—R.

Hippocrates - Father of medical science, he also gave the

theory of humors. (different types of body fluids)

Socrates said there are rational powers in man which will direct him

Plato can be regard as a dualist.

There is no difference between soul and body - dualism.

interactive dualism was given by (Descartes)..

gave the most detailed behaviour

Plato in his study of dualism,

Ideal consist in forms

Plato - knowledge is innate but is not immediately accessible.

and must be recollected through Explicated;

and exercise of rational faculties.

Basically trying to explain Nature Vs Nurture but want winning.

Aristotle :

said, hierarchy of souls..

- vegetative souls
- Animal soul
- Human soul.

Descartes : (17th)

shift from Animism → mechanism.

felt/said that natural process can be mechanically determined and can be explained in the terms of chemistry & physics.

Descard extended mechanical tradition was extended to psychological functions.

mechanical functions → Ψ functing.

father of theory of reflex - ; which was actually the precursor to the growth of S-R Ψ.

"I think therefore I am"

August Comte (19th)

Father of positivism.

He rejected everything that was speculative & metaphysical.

Only natural phenomena & facts that are observable must be studied.

Empericism :

Eg Locke, Hume, Hartley, Berkley.

proposed that all knowledge is derived from sensory experience.

Reference to modern objective psychology.

Locke - mind is like a 'Tabula Rasa' on which experience writes (Blank slate).

Hume — law of association { contiguity, similarity, contrast

~~James Mill & J.S. Mill~~

→ Associationism,

actually started with Descarte & even Empericists had similar Ideas. But it was magnified, came into fine light with James Mill & J.S. Mill (Father & Son)

J.S. Mill specially talked about creative synthesis which paved way for Gestalt & later on. which states, i.e. Combination of mental elements, creates something greater than or different from sum of the original elements.

again a shift towards non-empiricism

~~Herbart~~ Leibnitz & Kant → noumena & phenomena.

Leibnitz made the distinction between • Perception
• Apperception

noumena - things in themselves independent of human experience.

phenomena - own subjective phenomenal world. that is created after interacting with nominal world.

Perception & apperception

perception, mechanical associative fashion (mind responding to objects by its name).

Apperception is the awareness of meaning as modified by experiences, emotions etc. (meaning)

full conscious experience, when we are aware of it.

noumena ⟶ phenomena

creative transformation.

(which cannot be measured/quantified)

Helmholtz, Fechner, Weber } said that Ψ cal process can be studied in lab. & subjective experience can be quantified.

Wundt - established the first lab, where cause-effect relationship could be established. → method adopted was that of introspection.

Body Mind Relationship Controversy:

plato dualism ⟶ descartes interactive dualism ⟶ monism: ⟶ cognitive Ψ, Cog. neuroscience, Health Ψ, Psychoneuroimmunology

monism → (2 groups)
- those who believe only in mind
- " " " body alone.

Brain is where the mind is, mind is an hypothetical entity.

It was plato who first raised the question of dualism which distinguished mind from the body and considered them as two different and seperate entities. non-physical soul resides in the body during the persons life time but leaves at the time of death.

Other philosophers have taken a very different position that is monism, which believes mind and body happened to be one thing. Some monists are called materialists and they believe that world is physical and is governed by the influence of the environment on the physical body with mental experience being just another aspect of the physical operation on the body.

Watson, the founder of behaviourism is a materialist who argued that mental processes should not be considered as facts.

another group of materialists are those psychologists who focused on nervous system and argued that mind could be reduced to the brain activity occuring within the physical environment.

Other monoists called as mentalists believed that the physical world is all mental and that we can know the so called world through our mental experience. Only mental experience is real and brain is known only through our mental experience.

Most materialists take reductionist approach and argue that people do not have free will because their behaviour is completely determined by the activity of their brain or by the environmental forces acting upon the nervous system.

French philosopher descarts offered a unique solution to the mind body problem by taking a position of interaction dualism. that assumes that mind and body are seperate entities but they interact.

In recent times mind body problem is being investigated not so much as philosophical question but ijust as a scientific one. for example scientists who have studied functioning of specific parts of nervous system have tried to answer mind body question by asking about the areas where specific abilities are located in Brain, it is increasingly being realised that mind body connection is strong and is reciprocal in nature and the testimony to this is the emergence of the areas of study like cognitive science, cognitive neuroscience tvc & etc.

II. Psychological measurements

INDIVIDUAL DIFFERENCES :

1. Construction of a Psy test (60)
2. Characteristics of a good Psy test. (20)
3. Uses of Psy tests (20)
4. Misuses of Psy tests (20)
5. Limitations of Psy test (30)
6. Ethical issues in testing & Research (30)
7. Types of Psy test (30)

8. Reliability & validity of the test and the relationship b/t two. (20)

What causes Individual difference?

Heredity X Environment

Unique Interaction

Biological make up of the individual & the influence of environment on it.

Even when two individuals have identical genetic make up (say twins) environment influence may be different, causing individual difference.

Why do we study Ind. differences?

For optimisation of human potential.

despite its importance in determining the personality of an individual, this is being overlooked largely.

To a great extent overlooking individual difference has become a 'necessary evil' because if individual difference take genuine importance operating in the environment becomes difficult, overlooking I. difference makes life easy.

How do we study? method?

Twin Studies & Adoption studies.

overlooking individual differences leads to ⊙ stereotypes } 'category'
⊙ prejudice }

individual ends up in 'Overgeneralization'

Eg: In a conventional class a teacher may overlook Individual differences in terms of personality of the students, at the same time respect it in terms of cognitive ability of the students.

Arbitrary categorization is not accepted / not objective.

Psychological test is a standardized and an objective measure of a sample of behaviour.

? Sample of beh?

Some behaviours are so complex that they can't be measured with a single test.

[illegible] behaviours / expressions which align with

the trait / behaviour that we wish to measure are tested / considered.

Eg: It is presumed that creativity is the result of 'divergent thinking' - critical construct for creativity require

How do we go about it, we frame questions which (measure) produce divergent thinking which in turn enables us to estimate creativity. to test creativity

Why objective & standardized tests?

to get consistent results. which are objective.

accuracy ↑ objective ↑

Characteristics of a good Eval test

1. Reliability
2. Validity
3. Objectivity
4. Norms
5. Practicality.

Reliability

Reliability is the consistency of the test reflected in the reproducibility of the scores.

Reliability is an important attribute of a test because it indicates the extent to which the scores obtained on the test are free from internal defects of standardization. which are likely to produce an error in measurement.

Validity

Is the fidelity or the purity of the test

degree to which the test measures what it intends to measure unlike Reliability which is the self correlation of the test, Validity is obtained by correlating the test scores with the scores obtained on the criterion

and the criterion happens to be the best measure of the attribute the test intends to measure.

Reliability	Validity
Self correlation	comparision is with an External criterion
Different scores of same test are being compared.	Establishment of validity is tough.
Easy compared to validity	More important

A test can have ↑ reliability & ↓ validity

Objectivity :

Refers to the degree to which the test is free from subjective elements. Objectivity of the test is reflected by the extent to which there is interpersonal agreement among the experts regarding the meaning of the items and the scoring of the test.

There are two types of objectivity

1. Objectivity of the items
2. Objectivity of scoring system.

By item objectivity we mean that items be phrased in such a manner that they are interpreted in exactly the same way by all those who take the test as well as those who score it.

to ensure this, items must be written in a simple language using non ambiguous words.

Items must have moderate degree of difficulty.

there should be uniformity in the order of presentation of the items

Objectivity of the scoring system can be ensured when the test items are well defined and the scoring system is clearly laid. A good test is one with precisely defined and relatively simple scoring system.

when these conditions are met there is a high probability that the interpersonal agreement upon the experts regarding the scoring of the test thus can be reached.

Norms: Norms refer to average performance of a representative sample on a given test. norms are essential for the meaningful interpretation of the test scores.

Practicality: A test should be practical one from the point of view of the time taken for the completion of the test, length of the test scoring of the test, difficulty level of the test etc. as far as possible the scoring system and the method of test administration should be simple so that the test can be administered and scored even by the paraprofessionals.

TYPES OF TESTS

1. According to mode of administration

   ⓐ. Speed tests
   ⓑ. power tests
   ③. Individual tests
   ④. Group tests

Speed test:

where speed counts, degree of difficulty of items doesnot vary.
Scoring = No. of Questions/Items answered correctly.
in the allotted time.
Amount of work to be done & Amount of time given are grossly disproportionate.
So speed tests are time centric & speed centric.

Power tests:
In power tests there is no time limit but the degree of difficulty of items are different (increasing degree of difficulty)
now the trend is to combine these two characteristics in one test, which includes testing both speed & power.

→ Speed tests are the instruments with time limit attached to them and the candidate's performance is evaluated on the basis of who can answer the maximum No. of items accurately within the stipulated time. the items in a typical speed test have same degree of difficulty and generally speaking the No. of items happens to be quite in disproportion to the time allowed. and as a result most candidates struggle to complete the test within the stipulated time.

Eg; clerical speed & accuracy test of DAT

Power tests are designed to measure underlying ability of the subject, in a perfect power test time factor is not included but because of the administrative convinience most of the contemporary power tests have time factors included in it but sufficient care is taken to ensure that the paucity of time in no way handicaps the performance of the subject. In a typical power test items are arranged in the order of increasing degree of difficulty.

Eg: civil service optional exams mains.

Adaptive testing :

Individual tests :-

These tests are administered to one person at a time

Eg : TAT (Thematic apperception test)

Alexander Pass along test (performance test).

Individual tests give a comprehensive information about the person in question they are also used for clinical evaluation the limitations however are time intensive, cost intensive and requires the services of an expert both for administration & scoring.

Group tests Administered to more than one individual at a time they are economical, save time, and can be administered and scored by laypersons.

Criteria and norms are more easily available for group tests

limitation is that comprehensive enquiry of the subject is not possible. Eg. Army α & Army β tests

Norms : Average performance. Comparion W.R.T Average

Criterion : Standardized instrument is the base, for

On the basis of principles of construction used :

1. Standardized tests
2. Teacher made tests (TMT)

Standardized tests :

A standardized instrument is one which meets following four qualifications, (4)

1. It must have satisfactory ~~reliability & validity~~.
2. Must have satisfactory norms
3. There must be uniformity in the instructions issued to the subjects so that there occurs no ambiguity regarding the test items. The test items should be phrased in a simple and effective manner so that they are able to overcome semantic & psychological barriers that may occur in the test takers.
4. The method of scoring should be clearly defined and well laid so that uniformity can be maintained in the scoring of the test items. further an index of fairness of correct answers through the procedure of item analysis should be made available.

Eg : SBIT (Stanford Binet Intelligence test)

Teacher made test :

In these tests no explicit principles of test construction are laid down these are informal tests that are used for evaluating the performance of the students of a given grade or class.

Eg : class tests, grade V tests etc.

On the basis of nature of types of items included.

1. Objective types / New type. ↗ Supply
2. Essay types – Free answer types ↘ Select.

Objective type: tests are also called New type tests they have one correct answer which the subject has to either supply on his own or select from the given ones they are of two types. 1. Supply type Eg: fill in the blank
2. Selected types Eg: MCQ's

objective tests are essentially recognition tests and they are easy to score but the real challenge lies in constructing them.

Essay types: In these tests subjects are required to reproduce an answer by recalling the relevant details and by presenting them in a logical and organised manner.

Essay tests measure the ability of the examinee to organise a comprehensive answer by recalling and selecting relevant information. Essay tests are easy to construct but difficult to score. and they happened to principally be recall(ed) tests.

Which type is better ?

Depends on the purpose of the test.
- nature of the subject being selected.
- availability of instruments.

Objective type	Essay type
• Quick scoring. Standardised scoring procedure Perfect, If candidates ability of recognition is being measured.	• When we have to measure something abstract, recall ability organisational, creativity & so on

Just putting the test questions in an objective format does not render the test objective - Evaluate.

- Language could be ambiguous
- more than one alternatives.
- Guessing
- Response bias.

Subjective test becomes objective when interpersonal opinions (of experts) is same (more or less). ~~consensual validation~~ what experts agree upon.

Eg: in a Essay type test subjectivity can come up from any corner ... but only means of making it objective is by having a valid criteria for evaluation/scoring.

Essay test ≈ subjective tests.

Biggest asset of Essay type questions is that an individual's original point of view comes to surface, given he is allowed (free) to express freely.

But discuss the importance of validity & reliability in testing

Are the results obtained in different areas equally scientific and reliable?

Why is measuring creativity so difficult?

dynamics of creativity lie in unconscious as well

Explicit (conscious) + Implicit (Unconscious)

creativity involves mix both so ..... it's difficult to test creativity with a single test.

more ↑ no. of variables involves → subjectivity ↑ in a test

Can a test continue to have high utility despite low validity and poor reliability?

Yes.

Eg: while measuring creativity it is measurable and we have to have some questions/items related to unconscious, the moment unconscious is involved it leads to subjectivity but still overall the test will have some utility.

Any test will always strive to have ↑ reliability & validity but some can't achieve it to the fullest due to diff dynamics multidimensional of the variable being measured.
so reliability & validity could be compromised.

MCQ's have,

Stem / statement (language should be clear/simple)

alternatives ⟨ correct answers
distractors. ↑ distracting the options (strong)
↑ objective the test is.

Objectivity of

- Essay type depends on scoring (skills of scorer).
- objective type " — " skills of test constructer.

→ According to the theme measured the tests are of following types

① Aptitude tests : they measure our future potentiality Eg : DAT - Differential aptitude test.
"Future centric"

② Achievement tests : are designed to measure how much an individual has gained / profited from a specific training he has received
Eg : California Achievement test
It measures year to year growth in academic skills it compares the students achievement with others in the same grade.

③ Interest test : Interests are our preferences for a specific activity / activities
Eg : SVIB (Strong's Vocational Interest Blank)

④. Value tests :

Values are our generalized and dominant interests. They are our preferences for different ways of life

Eg: value survey by Rokech

⑤. Personality tests :

measure Our social traits and our capacity to make socio emotional adjustments

Eg: MMPI (minnesota multiple personality test) Inventory.

⑥. Attitude tests :

are designed to measure our predisposition to respond to specific object & objects.

Eg: Thurstone scale, Bogardus social distance scale

Accordig to medium used :

- Paper & pencil test
  eg : class test, SBIT
- Performance test measure motor co-ordination.
  eg: Finger dexterity test. by Stromberg.

Performance tests does not rely hugely on verbal instructions.

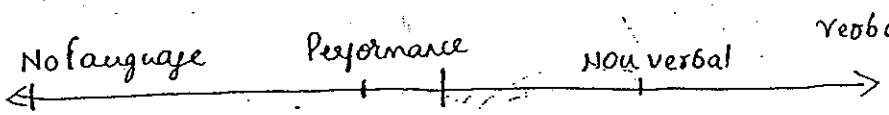
Can verbal tests be supplemented non verbal & performance test?

Yes.

According to basis of content

- Verbal tests
- non verbal tests
- Performance tests
- NO language tests.

Degree of language used



contain repeating degree of language used

Where is the layage used ?

~~Instructions, Questions & answers.~~

No language test is a type of performance test with no layage at all

→

A verbal test is one whose items emphasis reading, writing and oral expression as primary means of communication. Instructions are printed or written are read by the examinees and accordingly items are answered.

Verbal tests are also called as paper pencil tests.

Eg Jalota's Group intelligence test

Mehta's " " " "

Non verbal tests are those that minimise but not altogether eliminate the role of language. They utilise symbols like figures and pictures in the test items. They measure non-verbal aspects of the trait in question. In non-verbal tests the instructions emphasise the use of language. but in test Items language is not used

Eg : Raven's progressive matrices (RPM)

P. Test Examines performance of the subject on a given task. the emphasis is on measurement of motor co-ordination required to perform the given task In some performance tests instructions are supplied orally. but in understanding and answering test items language is not used. thus they happen to minimise but not altogether eliminate the use of language

these tests are administered individually.

Eg : Pegvale dexterity test

7

No language tests are language free tests, subject is not required to use language. The understanding of language neither helps in comprehending the test instructions & items nor in answering the test items. the instructions are also supplied to gestures and other non verbal signals. these tests are used for the people unfamiliar with the given language and for those who for some reason cannot communicate through language.

Eg: Block design test

On the basis of the scoring system used.

1. Hand scored tests (manual scoring)
2. Machine score tests (computer)
3. scoring done by subject experts

CONSTRUCTION OF A PSYCHOLOGICAL TEST

A test is a measurement device used to quantify behaviour or aid the understanding and prediction of behaviour.

testing has allowed quantification of behaviour

↓

aids generalization → facilitates.

↓

Step toward becoming a science discipline

→ Psychological test is a set of items designed to measure characteristics of human beings that pertain to behaviour.

Cronbach has defined psychological test as a systematic procedure for observing a persons behaviour and describing it with the aid of numerical skills & fixed categories.

Ann Anastasi defined psychological test as an objective and standardized measure of a sample of behaviour.

It is nothing but constancy in nature of items, method of testing scoring and so on.

Holding the things (which influence the result) constant and measuring diffent dynamics of a trait is (difficult) challenging.

Assumptions in psychological testing :

(1) It is assumed that each item on a test and all words in that item has similar meaning for different people.

(2) People are able to perceive and describe their self concepts and personalities accurately.

(3) People will report their thoughts and feelings honestly.

(4) Individuals tested behaviour is consistent over time

5. Test shall measure what it is supposed to measure.
6. Individuals observed score is equal to his true score + Error

$$X_i = T_i + E_i$$

X_i = observed score
T_i = True score
E_i = Error

measurement of behaviour will always carry error ?

Yes. we can't control Extraneous variables

Completely. Errors can only be minimised

Error variance will continue to be there.

This could be
- from testee's side
- from the part of testor
- Due to instrument used.

+ve correlation
$V_1 \uparrow \; V_2 \uparrow$

-ve correlation
$V_2 \uparrow \; V_2 \downarrow$

The variance should be the contribution of true score than because that of the Error — makes sense.

→ All tests have error factor made up of things like, the health of the subject, his attention span, emotional state, fatigue, cultural problems, previous experience, luck, noise etc and therefore most testing instruments are not perfect.

PURPOSES OF PSYCHOLOGICAL TESTING (Objective)

objective is to measure the individual difference as objectively as possible. Embedded in within this larger object happens to be the specific objectives such as Intelligence test carry an objective of measurement of individual differences regarding the attribute of Intelligence like wise attitude tests measure individual differences with regard to the attitude held for a specific object

To achieve the above mentioned objective a Psychological test strives,

① To establish a functional relationship with the specified variable/variables.

② To represent the specified universe of content

③ To measure psychological traits.

Functional relationship with the specified variable :

~~A functional approach is advisable~~. One which is clearly defined, quantified, objective.

1. operational definitions can (make) help Ψ become a science subject (objective).

definitely YES. operation definition facilitates objectivity.

Eg : behaviourism principles were widely accepted because they explained behaviour in S—R relationship which was more scientific and well defined.. Acc. cognitivists, mentalistic concepts could also be defined operationally that's why cognitivistic principles are still in use, valid though they are not as objective as behaviourists.

make operational the definition

∴ Applied value of the discipline ↑

∴ Objectivity ↑

∴ measurement, Quantification become easy

Humanistic dislike behaviourists & cognitivists as they do not bother to define their concepts operationally so their concepts are abstract. It has more of a philosophical bent of thought.

2. To (measure) represent specified universe of content.

STEPS :
1. Planning of the test
2. Writing the items of the test.
3. Preliminary administration of the test (Experimental tryout)
4. Reliability of the final test
5. Validity of the final test
6. Norms of the final test
7. Preperation of the test manual & Representation of the test.

Planning :

The construction of real test begins with careful planning. In this stage the test constructor specifies the broad and specific objectives of the test. He also decides upon the nature of the items to be included, the method of sampling to be used the type of instructions should be included, the detailed arrangement of preliminary and final trial administration the probable length of the test etc.

Item writing :

Item is the lowest common denominator of the test that can be scored, it is a task that is usually cannot be broken down into smaller units

Characteristics of a good Item :

- It should have moderate degree of difficulty.
- Item should be phrased in such a manner that they produce no ambiguity regarding their meaning to the subjects who take the test and as well as to the people who score it.
- Item must have high discriminatory power.
- Items must measure significant aspects of the understanding and knowledge
- Items should be neatly written and should be readable.

⊙ Items should not encourage guess work or bluffing.

⊙ Items should not be interlocked (one dependent on another)
(Items cannot be answered independently)
(interlocking is subject specific, occasional interlocking is accepted).

Requirements for effective item writing.

Item writing is essentially a creative act and therefore there are no set rules that can guarantee the writing of good items. A lot depends upon imagination, practice experience and ingenuity of the item writer.

There are however certain qualities that a good item writer must possess.

① Through mastery over the subject matter on which he wishes to make the items.

② He must be fully aware about the mental characteristics of the subjects for whom the test is meant.

③ He must have large vocabulary

④ He must be familiar with diff types of items along with their advantages & disadvantages.

⑤ He must avoid using stereotyped words both in the stem as well as the response options.

⑥ The item writer must avoid writing the interlocked items.

Types of items :

2 types ⊙ objective types
⊙ Essay types.

Subjectivity in objective types in terms of guesses
in Essay types subjective opinion.

Similarity
⊙ Both measure individual difference, & academic achievement.
⊙ Both dispite all claims of objectivity plagued with subjectivity thus error cannot be eliminated in both the types.

Difference
⊙ The assignment of numerical scores & essay items is entirely in the hands of the test scorer while in objective items it is entirely determined by the scoring key.
⊙ The objectivity of the objective item is dependent upon the skills of the test constructor where as essay it is dependent upon the skill of the scorer.
Objective items no matter how well they are constructed will encourage some guessing. where as Essay items with no matter how efficiently they are scored will permit some bluffing.
⊙ Objective items require the subject to identify the correct response. In other words they are the recognition tests and need n't/don't call for the subject generating the cues. on their own In contrast in essay items because they are the recall tests require the subjects to reproduce an answer by generating the retrieval cues through their own effort.

PRELIMINARY ADMINISTRATION (EXPERIMENTAL TRYOUT).
Done on a sample, which has been selected from the researcher.
Method could be ⊙ Cross sampling — Cross validation.
⊙ taking the same sample everytime.
Once this experimental layout is done, no changes can be done in the test. (simple validation.

If validity ↑ all other desired properties also ↑

→ When the items have been written down and have been modified in the light of criticisms and suggestions given by experts the test is set to be ready for experimental tryout. The objective of experimental tryout is,

1. To find out the major omissions, ambiguities and inadequacies in the items
2. To determine the validity of each individual item.
3. To determine the difficulty level of each item which in turn helps in selecting the items for their even and proper distribution in the final form.
4. To determine the reasonable time limit for the test
5. To determine the appropriate length of the test
6. To determine the inter correlation of the items so that overlapping items can be avoided.
7. To identify the ambiguities in the directions and instructions of the test.

To achieve these aims, 'Conrad' has suggested the use of three experimental tryouts. The aim of first experimental tryout is to detect gross defects ambiguities and omissions in the items and instructions.

Adding to Conrad for this administration the no of examinees should not be less than 100, he names this first tryout as 'Pre tryout'

The second preliminary administration which Conrad has called 'tryout proper' serves to provide the data for item analysis and for this the no of

examinees should not be less than 400.

Item analysis, is a technique through which those items which are suited to our purpose are selected and rest are either eliminated or modified to suit our purpose. Item analysis enables a test to establish,

1. ~~the difficulty value of each item~~
2. discriminatory power of each item
3. the effectiveness of distractors in MCQ's.
4. It indicates why a particular item in a test has not functioned effectively and how it can be modified so that its functional efficiency is increased.

The third preliminary administration which Conrad has named as 'Final trial administration' indicates how effective the test will actually be when administered to the sample for which it was designed. the third preliminary administration is carried out to detect any minor defects which might have gone unnoticed in the first two preliminary administration. Thus the IIIrd preliminary administration provides a kind of final check on the procedure of the administration of the test, the effectiveness of the items and on the time limit of the test. Once the final test administration is over no material change can be effected in the test.

* A construct is studied only when it is,

- Spread (large no. of people should possess it)
- Consistency in expression over time

RELIABILITY :

(or Replicability, consistency,

Reliability of a test is the consistency of the test reflected in reproducibility of the scores. A behaviour is said to be reliable if repeated measurement produces the same results ~~In the classical test theory~~, the concept of reliability is defined by using three assumptions,

1. Each person to be described by the test has some fixed amount of attribute of interest, this amount is known as person's true score.

2. Every observation of an attribute contains some degree of Error

3. Observed scores represents both the true score and some error.

The usefulness of the test is ~~got~~ Judged at least in part by the extent to which it is reflecting true rather than error variance. Reliability co-efficient provides an estimate of the proportion of the observed score variance i.e true variance rather than Error variance.

SOURCES OF ERRORS :

Time Influence : refers to fluctuations of test performance overtime. these Errors may occur due to practice and/or memory effect or even due to the naturalistic changes over time.

Content of test Items :

The test items usually are selected to be representative / ~~reflective~~ of the characteristic of interest but the items selected represent only a sample of those that

could measure the characteristic. Items of the test represent a sample from the population domain of possible test items. There is always a possibility of the examiner's selection of test questions not being representative of the course material and consequently those who should have done well did poorly.

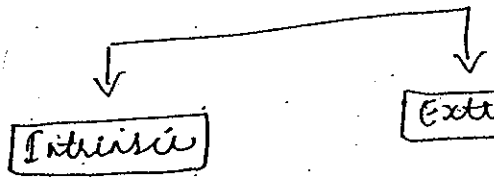
3. Test scores ~~of~~ are likely to be erroneous (full of errors) ~~if the test administrator fails to administer the test properly~~ if the test administrator fails to administer the test properly or if the test is not properly scored.

4 Errors may also result if the conditions of testing are not constant

5. Examinee can also be the source of error as there can occur fluctuations in attention span, motivation and interest levels, examinee may ~~not~~ feel bored, develop fatigue etc

The objective of developing a reliable test is to minimize the extent to which these kinds of errors influence the test scores.

FACTORS INFLUENCING THE RELIABILITY



Intrinsic, factors within the test that influence the reliability say length of the test, as length ↑ R ↑

In ~~the~~ 'long' 'length' is always taken as moderately long length

[Length ↑ Reliability ↑ ∵ consistency is reflected better here]

degree ↓ complimency
↑ intensity.

Intrinsic	Extrinsic
⊙ within the test. ⊙ Length ↑ Reliability ↑ moderately long test is the best Very long / very short X ~~not advised~~	⊙ External source / outside.

Difficulty level of the items :

A test with moderate level of difficulty results in ↑ R

Homogenity

Higher the homogenity level of the items ↑ Reliability

Discriminalty power of the items

A test that has got moderately high discriminalty power produces satisfactory Reliability

Scorer / raters' reliability :

It refers to the degree of agreement among the raters' on ~~the~~ rating the same set of responses.

Extrinsic Factors

- Factors outside the test that influence the reliability of the test,

Environmental conditions : ~~As~~ for a possible the testing conditions should be uniform.

Variability in sound, light and other aspects can lower the Reliability of the test

Guessing by examinees

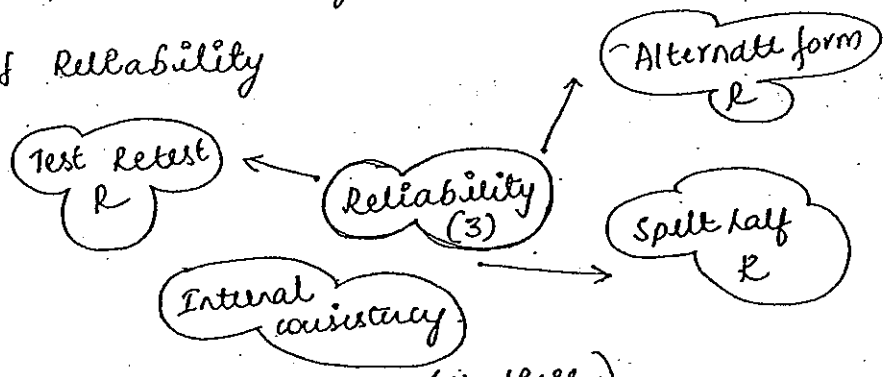
It makes the test unreliable as subjects donot exercise equal luck in guessing.

Momentary fluctuations within the examinee & for that matter the testing environment can produce an adverse impact on the test scores.

SAMPLE HETEROGENEITY (GROUP VARIABILITY)

The greater is the variability in the sample the more likely it is ~~that there will be variation in~~ between subject scores and the better would be the assessment of the reliability of the test.

Types of Reliability



TEST Retest reliability (stability)

Is the assessment of the degree to which the test scores are similar & stable over time Ve the degree to which scores change & fluctuate upon repeated testing. In other words stability is the extent to which individuals tend to obtain a similar score relative to other individuals upon retaking the same test. If the test scores are relatively stable across repeated testing seperated by a time interval we have some basis for believing that the test is measuring something in a consistent & generalizable (across time) manner.

The design for a study of a test retest reliability involves two administrations of the same test to the same individuals with a time interval seperating the two administrations. Typically this design should involve a time intrval of atleast a week between test & retest

Those who scored ↑ high continued to score ↑
" —— " ↓ low " —— " to score ↓
" —— " → average " —— " average
} Good / satisfactory test retest reliability.

Test retest reliability helps us to find, (Reliability) co-efficient.
Stability

Temporal stability — test administered to a group of sample

→

Reliability coefficient in test retest method is called as stability co-efficient and it indicates temporal ability i.e the stability of scores over time. Stability coefficient suggests to what extent the examinees retain their relative ranks as measured in the terms of test scores over a given period of time. Stability co-efficient can be obtained using any time interval but generally speaking the longer the interval b/t testing greater is the likelihood that the individual will actually change on the dimensions measured.

1 week to 15 days is ideal.

1-2 weeks is advisable

(motivation in that case is momentarily they don't last long)

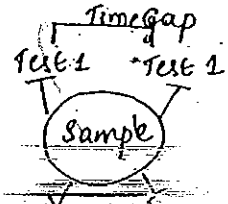
Test retest reliability is easy to compute and therefore popular but the procedure is not completely free from limitations some sup limitations are

→ Cumbersome procedure
→ Problem of attrition (you will miscut on people (subjects)
→ Practice & memory effects may operate to cause error in measurement
→ If the interval between two testing is usually large and the subjects are the rapidly growing individuals then the maturational factors may operate to dilute the reliability.

eg: Equitile maturation,
language development,

Centration
tendency to focus on one attribute of an object & nothing else one dimension viewing

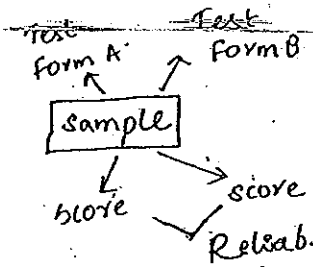
ALTERNATE FORM (Equicut form method)



Reliability established

In the previous case (test retest),

Over here in alternate form



- Single test is administered
- Easy to construct so more popular
- Assumes that subjects physical & mental state will remain the same both the time
- Practice & memory effect is present

Vs

- Two forms of the same test should be created
- challenging.
- no such assumptions so two equivalent forms are created.
- practice & memory effect is absent here.

→ Alternate form reliability assess the degree to which two different forms of the same test produce similar results. this type of reliability addresses those sources of variance associated with test content sampling.

If an individuals' score on one form of the test is similar to the person's score on an alternate form of the test we have increased confidence that the test items reflect some common characteristics or dimension and are measuring that dimension in a relatively consistent manner.

Once the two alternate forms have been constructed the alternate form design involves administration of the two forms to a single group of examinees the reliability co-efficient is the correlation between the two sets of scores

If the interval between the administration of the first form and the second form is very short, the resulting reliability co-efficient reflects the adequacy of content sampling and the extent to which the two forms are measuring the same thing. In addition to providing information regarding the degree to which test items themselves are the indicator of true variance & the error variance, alternate forms can also be used to estimate the tests' stability. If a longer time interval is used, stability co-efficient is obtained in this way will generally be lower than the co-efficients obtained from readministering the same test because they reflect not only changes over time but also the differences in the two forms of the test.

Over like, temporal stability comes into play if there is a time gap between the two (same) administrations. Biggest challenge here is the construction of equivalent forms.

- difficulty level
- instructions
- no. of items
- scoring.

All these factors should be taken into consideration in constructing two equivalent forms of the tests.

Should be same // similar

In order to measure the equivalence of alternate forms the 'Freeman' has suggested following considerations.

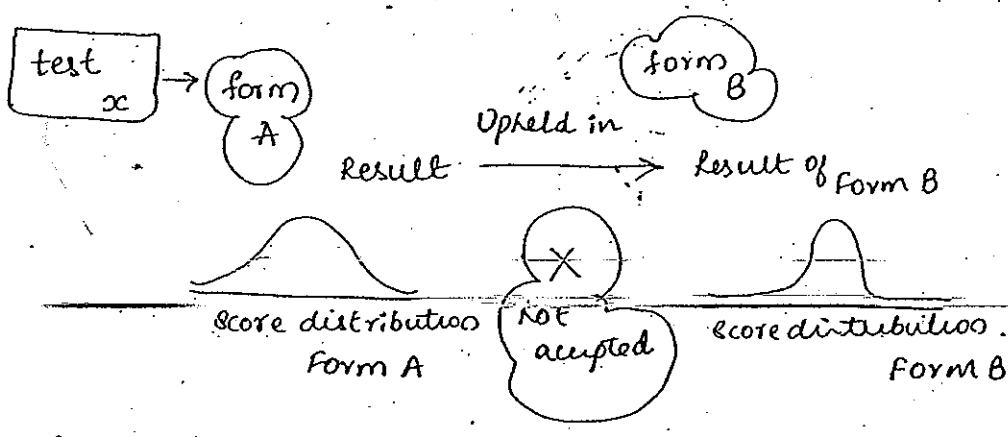
↳ 1. Items in both the forms should have nearly equal degree of homogenity

↳ 2. Number of items in both the forms should be same

↳ 3. Method of administration and scoring in both the forms should be the same.

↳ 4. Degree of difficulty of items in both the forms should be the same.

↳ 5. Mean and standard deviation in both the forms should be comparable.



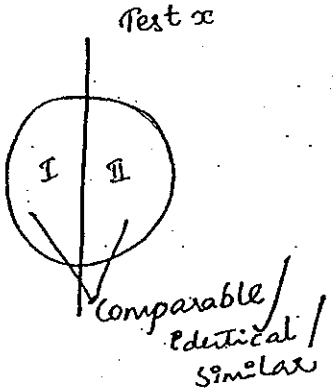
Limitations :

↳ If behaviour function under consideration is subject to large practice/and memory effect even equalent form may reduce but may not be able to eliminate these effects.

↳ Sometimes the nature of items change with repetation this is specially true with creativity test / Reasoning problems

↳ For many tests equivalent forms are not available because of the practical difficulties in constructing them

SPLIT-HALF METHOD.



A split half design involves dividing One test into two comparable halves the test is administered as a whole but the test scores are computed seperately for each half, the correlation between two half scores is related to the index of reliability Temporal stability of the test scores do not enter into this type of reliability since only one test administration is used. The major consideration in split half design is the means by which the test should be divided into two halves, generally the division should lead to the same kind of equivalence expected of alternate forms. A common approach to split half test division is to assign odd numbered items to one half and even numbered

items to another half. the reliability co-efficient obtained provides us a measure of equivalence of the items. the major advantage of this method happens to be that practice and memory effect gets eliminated.

2. All the data necessary for the computation of reliability co-efficient can be obtained in a single administration of the test.

3. The method saves time and also eliminates the problem of subjects mental and physical state not being the same on two testing occasion that happens to be a serious concern in test retest and sometimes also in alternate form methods of reliability estimation.

The biggest challenge however is how to split the test into two equivalent halves and the correlation b/t two half scores gives an estimate of the reliability of each half test but not the reliability of the full test.

Internal consistency

It is the degree to which each item of the test is measuring the same thing as each other item, thus inter item consistency or internal consistency indicates the homogeneity of the test. A test is homogenous to the extent an individual's response to the performance on one item is related to his performance on all the other items of the test. internal consistency is directly related to the unidimensionality of the test. The term unidimensionality refers to extent which the test item reflects one dimension rather than several dimensions (multidimensionality) An internal consistency reliability co-efficient is therefore a reflection of unidimensionality vs multidimensionality of the test items.

the more internally consistent the test is, the more evidence there is for the unidimensionality of the test items.

internal consistency ↓ unidimensionality ↓

Internal consistency ↑ unidimensionality ↑

Imp Alternate form method & split half method are III to Internal consistency method but Internal consistency may not always be identical to Alternate form & split half methods.

All three forms are III in terms of equivalent items being measured.

Heterogenity & Homogenity are not unitary concepts; they can vary along a continuum.

Eg: Perfect homogenity : Test of Numerical ability — addition
- Questions with same level of difficulty

Go away from P. homogenity : Test of Numerical ability — addition
Questions with increasing degree of difficulty

If the items are homogenous
- split half method
Alternate method
Internal Consistency method
} can have ↑ R.

With all such limitations why do we need internal consistency at all ?

↳ To retain the uniformity in the test (test items)
change (item - item) should not be abrupt

In case of split half method & Alternate form method, Reliability co-efficient could be high yet having low internal consistency.

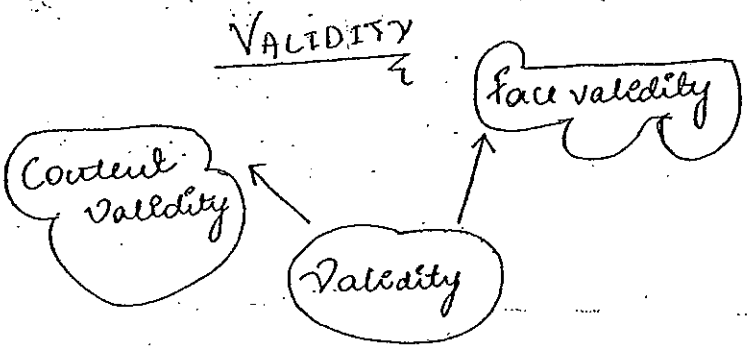
Basically, internal consistency method enables us to strike a balance b/t homogenity & heterogenity which is very much a characteristic of a good Psy test.
So we also need Internal consistency method of

Reliability is given importance, only to reach to a satisfactory validity in a Psychological test. In the true sense validity is the most cherished quality in a Ψ test than its reliability.

→ It should be noted that the estimates of internal consistency reliability will not necessarily be similar to the estimates of alternate forms OR split half reliability coefficients. All these types of reliability address the content of test items. The design of internal consistency study like that of split half study involves a single administration of one test. Following the administration of the test inter item consistency is computed.

Internal consistency reliability co-efficients are inappropriate for use with tests having highly restrictive time limits.

[∵ in a speed test basically level of difficulty is almost same and there are more no. of questions than one can attempt in the given time, First few items, subject could have done as he progresses further R ↓ ∵ time constraints.]



VALIDITY

Validity refers to trustworthyness or truthfulness of the test. Validity describes what the test measures and how well it does so. Unlike Reliability which is the self correlation of the test, Validity is obtained by the test scores with the scores obtained on the criterion and the criterion happens to be the best measure of the attribute that the test intends to measure.

Validity is represented in the terms of validity co-efficient

Validity co-efficient indicates how successfully the test is able to bring out individual differences with respect to the attribute under consideration

CHARACTERISTICS OF VALIDITY

- Validity is the dynamic property of the test because validation is an ongoing / continuous process
- validity is the relative term. A test is not generally valid, it is valid for a specific purpose
- validity is not All or none property of a test It is always a matter of degrees.

TYPES OF VALIDITY

CONTENT Validity

It refers to the degree to which test items are the representative samples of the knowledge & the performance being measured.

According to "Anastasi",

"Content validity involves essentially the systematic examination of the test content to determine whether it covers the representative sample of the

behaviour domain to be measured.

(Achievement tests will have content validation as its core concept whereas personality tests are not bothered about content validity. (domain of personality test is infinite)

→ The term content validity refers to how well the particular sampling of behaviour ~~and to measure a characteristic~~ reflects performance in the entire domain of behaviours that constitutes that characteristics.

Content validation allows us to judge whether or not the contents of a test is representative of the desired universe of content. content validity is a feature of those tests which are designed to measure how well the examinee has mastered certain skills & a certain course of study.

Content validity is examined in two ways,

1. Expert's judgement
2. Statistical analysis.

Requirements of succesful content validation

↳ Succesful content validation calls for precise and accurate definition of the dimensions of interest that is the dimension that the test items are (expected) intended to reflect.

↳ Content area should be clearly defined because if specified explicitly then all the major areas can adequately be covered by the items.

↳ Once the domain is defined the sampling of the items from that domain should be sufficiently broad and representative to allow direct inferences to it.

↳ The relevance of the items should be established in the light of examinee's response to those items and not in the light of apparent relevance of content

i.e Subject should feel that the item is relevant, not the tester who has written the items.

It is simply the adequacy with which the test items sample the content area being measured

i.e through expert judgement & Statistical analysis (correlation)

Face validity

↳ item should fall in my zone of acceptance
↳ Language should be simple, easily comprehendable by the subject.

→ It is the extent to which the test items appear to measure the variable being measured. Face validity refers to what the test appears to measure superficially. Thus face validity is not the validity in the technical sense. A test is said to have a face validity when it looks valid to a group of examinees.

Face validity is needed in all types of tests as it helps in improving the objectively determined validity of the test by the way of improving the wording and the structure of test contents.

The purpose of face validity is to secure the co-operation of the examinees in responding to the test items because if the items appear to the examinees as irrelevant, they are likely to give irrelevant answers.

a test can have ↑ Face validity
↓ True validity. Yet

Criterion Related V

It usually refer to the extent to which a measure of an attribute demonstrates an association with some independent & external indicate of the same attribute, this external indicate called the Criterion often represents the behaviour we are actually interested in and we wish to use test scores to predict status / performance on the criterion.

There are two kinds of criterion related validity

1. Predictive validity
2. Concurrent validity.

Predictive validity is studied when the criterion is measured some time after the scores are obtained on the predictor. We are interested in how present status on the test predicts future status on the criterion variable Predictive validity therefore it the extent to which test is effective in forecasting and differentiating behaviour of performance in a specified area (or actually) under actual living conditions.

Predictive validity is a feature of test that are involved in long range forecast of academic achievement or vocational success. It is the feature of aptitude tests.

c. Concurrent validity is studied when both the predictor and the criterion scores are obtained at the same time. We are interested in the relationship b/t the present status on the test and the priest status on the criterion.

Although similar in spirit to predictive validity. the procedure actually uses post-diction rather than prediction.

1. If a test has criterion validity, will it also have content Validity?

2. What will happen to a test whose content validity or criterion validity couldn't be established? It go for construct validity.

3. If in criterion validity, test is validated against an external criterion, In that case in content validity, content itself will be that criterion? Is it so?

Criterion Validity established against a criterion with time gap Predictive V.
Validity established against a "—" without time gap. Concurrent V.

Content validity ll be associated with achievement tests.
criterion " —— " —— . Personality tests.

Eg: say, Elephant : Pen, Notebook : ?
Lake, Content validity.

Eg: Predictive V. :
A test designed to measure clerical skills ll have ↑ predictive validity if it predicts successfully who will and who will not succeed in clerical job

On the other hand one way of evaluating concurrent Validity of a test for clerical skills would be see how the scores on the test correlate with known clerical skills of a group of clerks whose performance has been evaluated in actual working conditions.

Only if the scores on newly constructed, Intelligence tests are correlated with the scores obtained on already standardized intelligence tests then the resulting co-efficient of correlation is one indicator of concurrent validity.

A comparitive study of predictive and concurrent validity reveals that, for the same test predictive validity is generally lower than the concurrent validity, the reason being that the degree of association between the test and the criterion scores decreases with the passage of time.

~~CONSTRUCT VALIDITY :~~

Construct validity represents one of the most significant advances of modern measurement study and practice. It is a significant advance because it unites psychometric notions with theoritical notions. The measurement expert when he enquires into construct validity of the test wants to know what psychological and other properties explain the variance of the test. He wishes to know the meaning of the test. If for example it is an intelligence test, he wants to know what factors lie behind test performance.

Construct validity is also called as factorial/trait-v construct validation is much more complex and difficult process than content/criterion related validation. Hence an investigator decides to compute construct validity only when he is fully satisfied that neither any valid & reliable criterion is available to him and the universe of content is entirely satisfactory and adequate to define the quality of the test.

Anastasi has defined construct validity, "as a extent to which the test may be said to measure theoritical construct & trait. Thus construct validity of a test instrument is based on the determination of the degree to which the test items capture hypothetical quality/trait.

A construct is a set of a concept which is formally prepared with a definition and is related to empirical data.

PREPARATION OF THE MANNUAL & THE REPRODUCTION OF THE TEST

In the manual the test constructs makes a mention of the psychometric properties of the test, he presents detailed information regarding the administration of the test scoring of the test, information about the R & V of the test etc. and finally depending upon the demand i.e test is likely to ~~stimulate / create~~ be orders for the printing of the test.

Uses of a Ideal test

- Personnel selection
- Personal training
- Guidance & counselling to the subjects → career counselling → Vocational & Educational
- Clinical diagnosis & treatment
- They facilitate individuals' decision making.
- They are useful in the selection of Experienced candidates.
- Psychological tests have enabled individuals to understand themselves better by informing them about their strengths and limitations and by suggesting them the ways to bring about self-improvement.

MISUSE :

- Invasion of privacy
- Blackmailing by the Ψ
- Breach of confidentiality
- Result of a Ideal test shouldnot be made public and if for some (else) reason the information has to be made public then sufficient safeguards should be undertaken to ensure the anonimity of the subject concerned.
- Deception refers to making a person believe in something that is not true deception needs to be deployed only when other methods of enquiry are not available and where the experimenter is completely sure that the effects of deception can be

undone before the subject leaves the experiment

- Indiscriminate use of testing :

When Psychological tests are used without ample reason they are likely to reduce the faith of people in testing and might end up creating unnecessary self doubts in the subjects being tested.

- Competence of the tester

Testing by the incompetent tester.

Incompetent testers besides failing to make correct diagnosis are also likely to mislead the subjects. Hence by causing unnecessary confusion. Therefore any Organization carrying out Psychological testing must ensure that only qualified people are allowed to implement and administer Psychological tests.

- Secret techniques & scoring methods.

In the profession of psychology and in the use of Psychological tests most formulae & techniques are not acceptable and those who use them happen to be unethical persons such individuals should not be allowed to use Psychological tests until they prove their claim and make available their methods to scientific investigation.

- Overpromotion :

A great danger in Psychological testing is the possibility of it being over sold to its prospective clients. Many testing Organizations exist and they make overly exaggerated claims, these claims are much more likely to be made when unprofessional psychologists run these Organizations.

Psychology is a good thing but it should not be overdone. Authority should ensure that more exaggerated claims are made regarding the Psychological tests.

But the correlation with external independent criteria may be high.

↗ A test constructor should not always try for high reliability and validity in the same test because in doing so he may be working at cross purpose because the goals of reliability and validity happen to be opposite to each other, it requires items of equal degree of difficult and high intercorrelation among the items whereas high validity requires items of different degree of difficulty and low inter correlation among the items.

— 'Guilford'

↗ Tucker is of the opinion that if interitem correlation can range from 0.40 to 0.60 we can have a test of satisfactory reliability and validity.

↗ A test said to have satisfactory reliability if it ranges from 0.80 – 0.95 & satisfactory validity if it rages from 0.50 – 0.60

Satisfactory R & V

- SBIT (Stanford Binet Intelligence test)
- MMPI (Minnesota Multiphasic personality Inventory)

Poor R & V

- RAT (Remote association test) [creativity test].
- Horn's ART aptitude Inventory

NORMS OF THE FINAL TEST

Norms refer to the average performance of a representative sample on a given test. Norms are essential for the meaningful interpretation of the test scores. For the creation of satisfactory norms it is essential,

1. That the sample selected must represent the population
2. Sample selected must be large

Types:

Age equivalent Norms

Applies to those attributes which increase systematically over time.

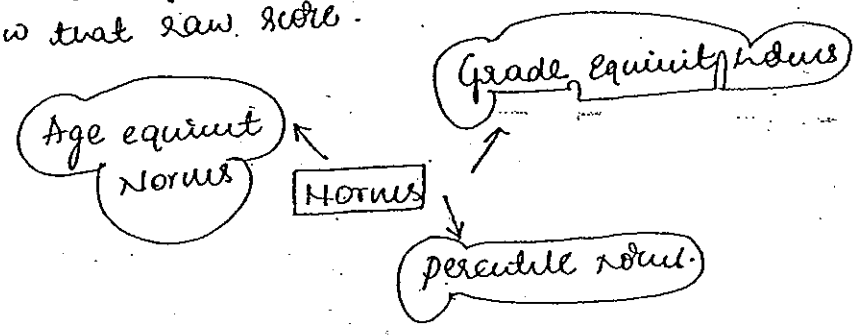
They represent average performance of a representative sample of a certain age level on a measure of certain trait or ability they are suited to the ability which increase systematically with age such as physical traits like height, weight etc

Grade Equivalent norms.

Are the average performance of a representative sample of a certain grade or class

Percentile Norms

Are most popular and most commonly used norms in psychological and educational tests. A percentile norm for each raw score indicates the percentage of standardization sample whose scores fall below that raw score.



Likewise, it is also necessary that the test should not correlate with the measures with which it should not because they do not happen to be its expected referents and when the test does so i.e, correlates poorly with measures with which it differs it is said to have ↑ discriminant validity.

1. Length of the test : Length ↑ V ↑ (moderately long)
2. Sample heterogeneity : heterogeneity ↑ V ↑
   (more heterogeneity ↑ true sample of the population)
3. Ambiguous directions : likely to lower the validity.
4. Degree of difficulty : (moderately difficult)
   ↑ difficulty level validity ↓
5. Discriminatory power : D.P ↑ V ↑ (higher ↑ V superior)
6. Socio cultural factors : If the test item reflects cultural bias then it is likely to lower the validity of the test.

Relationship b/w R & V

↳ They are the two sides of the same coin
   i.e test efficiency
↳ As the length of the test ↑ R ↑ so does V ↑
   but at a slower pace.
↳ Reliability is the self correlation of the test whereas validity is the correlation of the test with external independent criteria
↳ A test with poor correlation is not expected to produce high correlation with external independent criteria
   Or a test with poor R is not expected to yield ↑ V

Does R guarantee V ? does V guarantee R
so R & V guarantee each other ?

- I have R ⟶ there can be no guarantee for V.
  (consistent result) ⟶ yet not V.
- High validity can ensure ↑R if it is a homogeneous test.
- ~~High reliability is a precondition for High V.~~
  ~~but High R cannot guarantee ↑V~~
  except for homogenious tests.

In heterogenious tests,
↑ V may not guarantee ↑R
However a test constructor always strive to attain ↑R & ↑V.
In heterogenious tests
internal consistency may be ↓ but V ↑ (∵ it is based measuring ~~indy~~ difference.
But sometimes a desire to have ↑R & ↑V — it can create adverse effects.
It is very difficult (almost impossible) to have ↑R & ↑V in a single Final test.
It is a tight rope walk for the test constructor.
Test can have only moderate level of R & V.

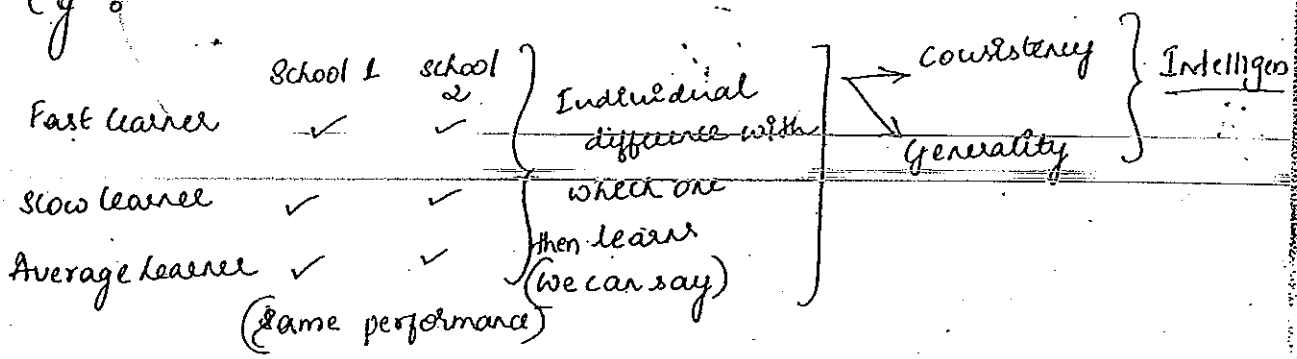
⟶

Reliability is the precondition for validity. Without High Reliability it is not possible to have the test with High validity but a test with High Reliability need not necessarily be valid, however a test of High validity guarantees High reliability but this is applicable only for the homogenous tests.

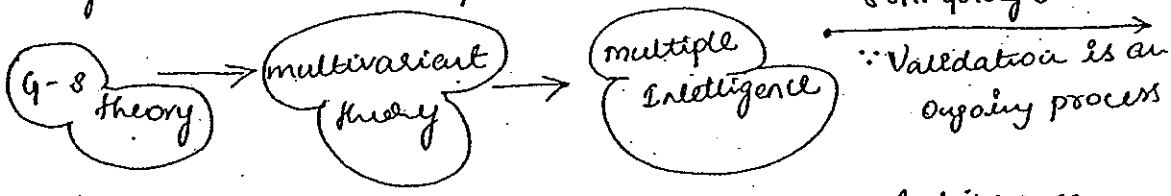
In heterogenous tests however, validity may be High even without reliability being High. particularly the internal consistency, this is because in a heterogenous test each part measures an independent function and thereby there is a possibility that the correlation may be low.

A construct indicates a hypothesis which will tell us about the variety of behaviours that will correlate with one another in the study of individual differences.

Eg:



Intelligence theories come up.



one theory which brings out the individual difference will prevail.

[for this purpose psychometric properties are also taken into consideration]

↳ • define the 'construct' — Hypothetical level
↳ • what factors/variables constitutes the construct.
↳ • write items — Quantify (construct the items)

Steps in construct validation.

Construct validation is the process of gathering data to support our contention that the test designed by us to measure the construct is actually the reflection of the construct & the attribute it is designed to measure.

Construct Validation proceeds through the following steps.

↳ 1. The construct of interest is carefully defined and the hypothesis regarding the nature and extent of its relationship to other variables are postulated. this becomes possible only when the test constructor has specified all the possible measures of the construct.

↳ 2 Identify the extent of correlation b/t the measures of the construct, this is possible only when the instruments designed to measure the constructs have been developed

↳ 3. determining whether or not these measures sucessfully measure the constructs, In other words the test constructor tail to find out how reliable and how valid the instrument that he has designed to measure the construct has been.

Explain the role of Construct validation discriminant ↓ (convergent) & Convergent validation In ?

discriminat : my test don't correlate with those tests which it should not correlate with (

convergent : my test has a correlation be with those tests with which it is expected to have some correlation?

Double check kind of thy ensuring the validity of a test

'Camp bell & Fiske'

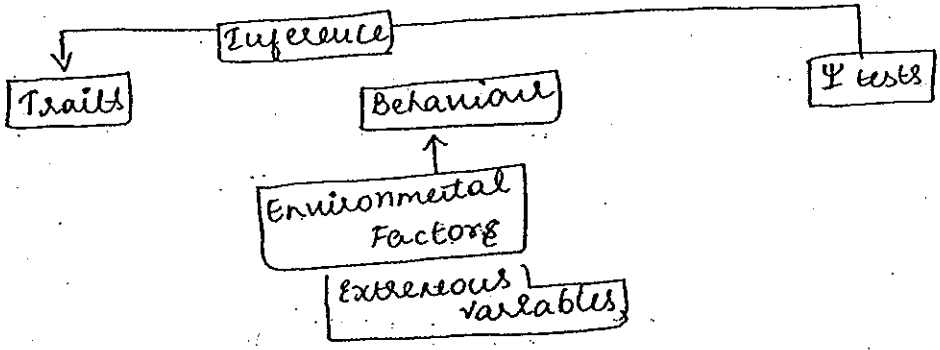
Sucessful Construct validation, calls for convergent & discriminat validation for convergent validation it is essential that the test correlates with all other measures with which it should correlate and when the test sucessfully does so In other words it 'correlates with its expected property it is said to have convergent validity.

It is better that Ψcal testing develops slowly & gradually than it developing rapidly and causing people more harm than good. A psychological test should be put to use only when its credentials are proved and reliability & validity assured this would imply that only few quality tests are produced but it would ensure that ones that are produced ~~to be truely~~ objective instruments.

LIMITATIONS OF Ψcal TESTS :

↳ **Lack of absolute Zero** we work with arbitrary zero.
So findings are always Relative in nature.

↳ **Indirectness of Measurement**
Findings ll always be subjective.



↳ **Incompleteness of the test**
A Ψcal test is generally incomplete and therefore Ψcal of Educational variable that they measure also happen to be incomplete

Eg : If we construct an attitude scale to measure attitude towards Co-Education, then we have to include in the scale a no. of samples of behaviours expressing such attitude.
This has no limit and therefore any attempt to measure attitude would be incomplete & partial.

Problem of cutoff :

Tester faces the problem in deciding cutoff scores in any I test.

4 types of things can emerge : True +
True −
False +
False −

True + Ones who scored above the cutoff — represent the case of right selection.

∵ they have the required ability.

True − Score below the cutoff and are rejected - represent the case of correct rejection lack the Ability required.

False + Score above the cutoff — selected. represent the case of incorrect selection lack the required Ab

False − Score below the cut off & are rejected represent the case of incorrect selection ∵ they have the ability required.

To decide the cutoff we should consider
- objective of the test
- Time cost & labour required.

For specific jobs like pilot — we can't lower the cutoff -

Categorization :

It can hamper the self efficacy of the individual. Psychological tests have provided us information about individual differences and in many cases have successfully enabled individuals' understand their strengths & limitations. The knowledge of which has enabled these individuals to work successfully towards accomplishment of their life & occupational goals.

However, due to ~~discriminate~~ and ~~injudicious~~ use of test tests some people have found themselves wrongly branded in certain categories which weaken when socially desirable has resulted in humiliation, embarrassment, and reduced self efficacy

Self efficacy = self worth

Invasion of privacy

Some psychological tests particularly projective tests may bring to the surface latent feelings, motives and attitudes without the knowledge of the person being investigated this deliberate attempt to look into persons unconscious particularly without his consent is unethical and also carries the risk of person being subjected to blackmailing by the tester later on.

Response bias (Response set)

According to Cronbach "response bias is the tendency of a person to give different responses to the item than he would when the same are presented in a different form."

Response bias can be defined as the tendency of the examinee to alter their responses to the test questions in a manner that they start indicating something other than what the test is generally intended to measure.

The term Response bias sometimes is interchangeably used with the word 'Response set' which is the kind of response bias that occurs as the result of the assumption of certain mental set by the examinees.

Types of Response set / bias

Deviation : Is the tendency to give very unusual or uncommon responses to the items of the test.
It is a feature of projective tests.
deviate so much that meaning is lost.

Evasiveness

The tendency to avoid (2) to fixed response categories and answer in the favour of doubtful category
It is a feature of personality & interest inventories.

Guessing.

Is a feature of ability tests and it invalidates the test results by (undesirably) inflating the scores unincorrectly

Tendency to work speedily.

The tendency to work for speed rather than accuracy is a common response set observed in the test designs to measure ability.
Examinees with Ego-oriented motivation go through the test of ability rapidly without caring much for accuracy. this behaviour by the examinees fails to reveal the true picture of the traits being measured.

Faking good & Faking bad

Faking good is a social desirability tendency and is a very common response test observed in personality tests and service selection tests. It refers to the tendency of the subjects to answer the test items in a manner that creates a favourable impression of oneself. Faking bad on the other hand is the tendency to give answers that may create unfavourable impressions of oneself. such tendency is also called as

Social undesirability tendency.

Both are equally common

this faking good & faking bad is known as. Impression Management

Aquiesence set (Aquiesense)

refers to the tendency of to answer all the test items in the same systematic manner. such as responding to all the items of the test either in affirmative or in negative.

aquiesence is now used only for 'YES' saying tendency

for 'NO' we use Negativistic set

Consequences of response set

↳ They reduce the range of individual differences

↳ they contribute to error variance by diluting the test with the factors that are not the part of the test.

Overcoming response bias

1. ↳ By adapting the degree of difficulty of the test
2. ↳ By modifying the test instructions, the instructions issued to subjects
3. ↳ Redesigning the test items: MCQ's in place of 'YES' 'NO' items
4. ↳ Use of correction keys

Ef

5. Use of more appropriate scoring formulae

Faking good Bad is v. less in projective tests.

↑ personality Inventories.

Methods of Ψ

1. Experimental Method (60)
2. F. expt Vs F. study (20)
3. Lab Expt Vs F. Experiment (20)
4. Threats to internal & external validity. (20)
5. ~~Extraneous variables & the ways to overcome them (20)~~
6. Experimenters' bias & demand characteristics (20)
7. Strengths & limitations of Experimental method (20)
8. Experimental Vs non experimental methods (20)

} Experiment

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1. Interview Method (20)
2. Questionnaire method (20)
3. Longitudinal Method Vs Cross sectional Method (20)
4. Case study or case History method (20)
5. Field study method (20)

} non experimental

↳ Quasi experimental method 20/30.

↳ Observation method (20/30)

OM
↓ Exc ↓ nonExc ↓ Q

↳ F-group (Focus group method) (20).

↳ Brain storming (20)

↳ Expost Facto method (20)

↳ Research and its characteristics (20).

↳ difference b/t Fundamental Vs Applied Research (20)

↳ Diagnostic & prognostic Research (20)

↳ Disciptive Vs Evaluative research (20)

↳ Grounded theory Research (20/30)
Backward from data → hypothesis.

Observation will be a part of all the methods.

Research Method → Critical, Systematic, Empirical, Enquiry, Scientific → Presumed relationship between variables under consideration

- Qualitative Vs Quantitative
- Descriptive Vs Evaluative
- Experimental Vs non experimental
- Causal Vs Correlational

OBSERVATION METHOD :

↳ Observation is regulated perception
↳ systematic and precise · perception of events.
↳ with minimum bias & maximum accuracy.

Pauline Young (Anthropologist) said

" deliberate study through the eye

- Observation method
  - Controlled observation
    - Experimental method
      - Lab expt
      - field expt.
  - Uncontrolled observation.
    - Observation with intervention
      - Disguised participant observation method
      - Undisguised participant O. method
    - Observation without intervention.
      - Naturalistic obsn

Controlled : Independent variable is manipulated
dependent variable are measured
extraneous variables are controlled (checked)
IV – DV relationship gets established.

Uncontrolled :

IV X, (not manipulated)
EV X (not controlled)
↳ cause relationship is speculative/no causality is established

Naturalistic observation is done by Ethologists.

study – animal behaviour

sp. typical behaviour.

species specific.

Eg : Harry Harlow – studied monkey (contact comfort)

Lorens studies Duckling & goslings

~~(cuckoo) (their offsprings)~~

concept re game — Imprinting.

Milinowski Trobriand Island Trobrianders.

Observation Methods.

Experimental method.

Lab Experiment Field Expt.

Survey method Non Expt

Interview Field technique

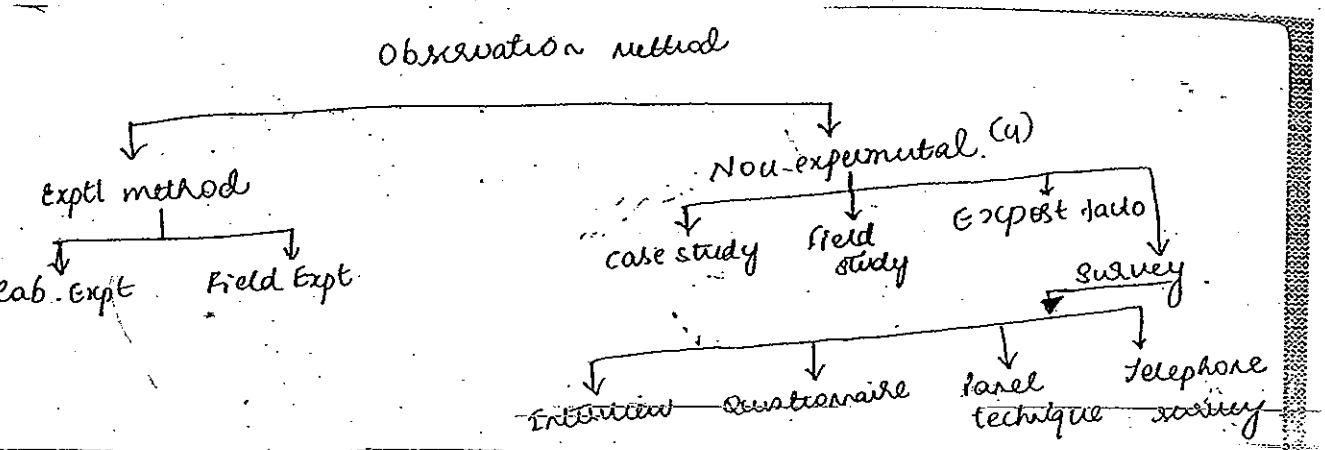
Questionnaire

Non experimental method.

IV – not manipulated

DV = not collected

IV–DV – speculative



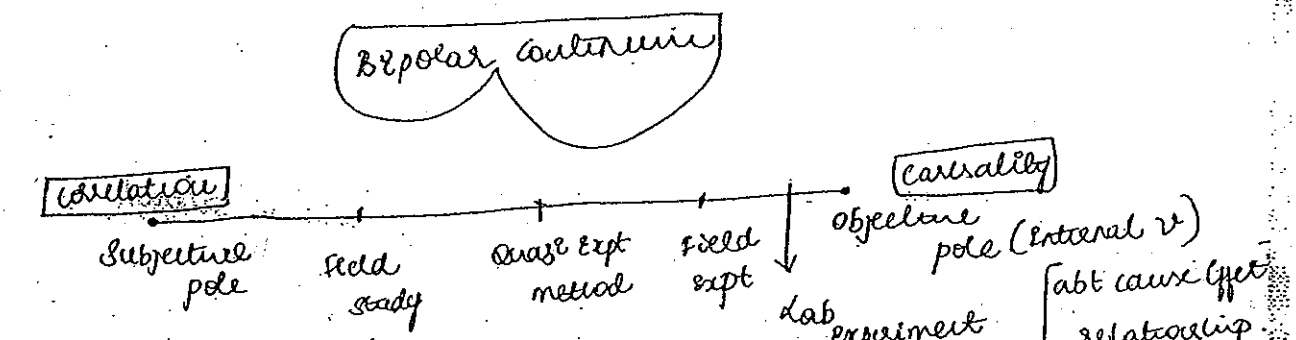
correlational ? → causal research

Non experimental research involves correlation ? Yes.

correlation research, Retrospective ? simultaneous ? prospective ?

↳ correlation could be Retrospective, simultaneous or prospective.

↳ Most of correlation is Retrospective in nature though.



(External validity)

Low close the study is to being natural

degree of naturalness

Lab experiments:

- naturalness ↓
- artificiality ↑

controls introduced — behaviour constrained.

What was designed in lab is applicable in field

Field study

naturalness ↑, artificially ↓

But C & E relationship is speculative

≅ naturalistic observation

expect that the remain beings are studied

only aims ↓ Extraneous variables.

Field expt offers us C&E relationship owing to the fact that we have controlled the variables which are potential enough to influence the dependent variable.

Expost facto method
(Retrospective investigation)

It is a method in which the researcher tries to relate the behaviour which has already occurred to ~~its probable causes~~

Kerlinger

Kerlinger's definition.

It is an empirical investigation in which the investigator draws the inferences regarding the relationship between the variables on the basis of such independent variables whose manifestation has already occurred, in this type of research the researcher exercises no control over extraneous variables and doesnot have any opportunity to manipulate independent variables as they have already occured much prior to producing their effect

Eg: Lung cancer ↪ smoking
(effect) (Probable cause)

this has already occured

limitations: Lung cancer could have been due to some other reason also say heridity factor, glandular dysfunction.

Muthayan.

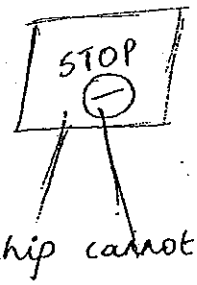
Advantages:

Zygotic effect. Incomplete tasks are better remembered than completed ones. Showed a great Ψ

Advantages (In social science Research)

It has an important place in social & behavioural science research for the reasons that,

1. Many times control over extreneous variables cannot be exercised for the reasons of ethical & social constraints.
2. Independent variable is not available for manipulation & the researcher is not a position to manipulate it. In such situations the researcher has no option but to carry out enquiry through expost facto research.



Limitations

1. E.V control absent
2. I.V. manipulation absent
3. Definite cause-effect relationship cannot be established
4. Post hoc fallacy

[If two things happen together we assume that one is the cause the other is result]

⟹ It implies that the researcher may miserably conclude the cause effect relationship b/t two variables just because they happen to go together

∵ human being has a tendency to find/search a rational reason/cause behind the occurance of any behaviour.

Eg:

Interview
Field study
Case study

} are all retrospective in nature. So can be examples of Expost facto R. method

Field Study

It is an expost facto scientific research in which the researcher systematically tries to discover the relationship and the interaction among the variables in real life situation.

the two defining characteristics of field study are,

1. ~~It is an expost facto study~~
2. there is no direct manipulation of independent variables and no control over extraneous variables and therefore definite cause effect relationship is not established.

Types (2)

1. Exploratory F. study
2. Hypothesis testing F-study.

EXPLORATORY The object is to discover significant variables in the field situation and find out the relationship between them so that the ground work for more systematic testing of the hypothesis can be laid. Exploratory field study seeks to answer the question "what is ?" It however doesnot predict the relationships between the variables.

Eg: 1

Theory	Hypothesis
Generalised principles. well accepted/established Universal recognition.	Tentative statement, awaits confirmation. might have local applicability. may/maynot be accepted.

theory. ← become if accepted/proved

True test of hypothesis can be done only through experimental method

since expt cannot be conducted in every case,

now Experimental method are still used

when we have choice — Go for the purest form/method

Hypothesis testing field study :

Investigator formulates the hypothesis and then proceeds to test them ; he provides the concrete evidence for such testing. the investigator aims at predicting the relationship among the variables.

Eg : Malinowski's expt on Trobriand Island.

Advantages :

- Opportunity for direct observation of social interactions & relationships is present in field study
- Since it is done in naturalistic settings External validity is ↑ in other words findings obtained can be generalised to other similar situations.
- Continuous observation for a given period of time is possible
- Inter group & Interpersonal relat°-ships and interactions can be best studied through field study because it is difficult to replicate such a social environment in the lab. or for that matter Even in field experiments.

Disadvantage

- I V manipulation not possible
- E V control, absent
- Internal validity ↓

& therefore, cause effect relat°ship is speculative.

- If the field study happens to continue overtime it may become time cost & labour intensive exercise.

etc's →

Experimental method : • Replicability ↑ & objectivity ↑

• We can redo the expt any time create the environment

CASE STUDY

It is the descriptive record of an individuals' experience and behaviours kept by an outside observer, such record may be produced by systematically recording the experiences and behaviours as they have occured.

Clinical Ψ relies heavily on case study method and it has borrowed this method from medical sciences.

It is an expost facto method of enquiry which is undertaken to study the individual and sometimes even an institution in a unique setting and in as intense manner as possible. In case study method, individual is examined with respect to a single variable and the attempt is to create the biography of the concerned individual by collecting information from a variety of sources, these sources may include,

- The interview of the individual, his family members friends and significant others
- Examination of individuals' personal documents
- School records & anecdotal records.

Use of projective tests and psychometric tests to collect the information from the person being studied.

Field study Vs case study

Must b Gyan

Similarities

- Retrospective
- Non experimental
- Expost facto

differences.

Field study	case study
Group studied in the event.	Individual seperated from his environment

It was Freud who popularised the use of case study method in Ψ

His psychoanalytical theory was the result of the data he obtained

from the case studies of his patients that he had developed during the course of his diagnosis and treatment.

Freud using case study method carried out diagnostic and treatment of patients named, Fraulein Elisebeth who happened to suffer from hysterical paralysis. By systematically gathering information about her life from various sources Freud was able to zero up on the crucial (?) ~~in her life that were responsible for her distress and ultimately~~ by removing those variables through the resolution of the conflicts in the unconscious, Freud enabled the young lady overcome her problem.

CLINICAL METHOD

It is the outgrowth of psychoanalytical perspective and it stresses on the importance of understanding individual by combining interview data, observations and test scores. Case study method is the principle method deployed in clinical research however unlike clinical method which limits itself to the study of abnormal behaviours case study method has much wider scope as it is not limited to the study of only mentally ill individuals.

The various business schools also make use of case studies of the business that have succeeded & failed to teach their students to review the steps that were undertaken and therefore better understood the business dynamics.

advantages :

1. It allows for close examination of a particular event or behaviour
2. It helps in advance scientific thinking by providing counter instances [i.e Hypothesis gets disproved, which we predicted or believed to be true]

i.e Instances that have violated well established principles

Eg: Jean Marc Itard, "The wild boy of Aveyron"

was a feral child reared in the community of wolves. the idea that language follows "critical period" development was established based on the case of wild child.

meaning to suggest that after a critical period passes away in the life of an individual - certain behaviours/traits cannot be learned. i.e unfolding of such a behaviour despite the animal having heridity/genetical disposition in him/her.

Language development & intelligence are believed to follow such critical development.

Critical period:

The period when the organism is genetically primed to learn/inculcate/unfolding a behaviour but it (process) should be in contingent & should be facilitated by the stimuli in the environment.

Another case of similar kind is of "Genie" Expt by Curtiss

Genie was isolated in the backroom of her parents house. But yet she could learn a few things which were taught to her when she was in puberty stage.

So the concept of "Critical period" was redefined as "Sensitive period" in the case of human beings.

which proved that human beings do have some capacity to learn a few behaviours even after critical period has passed. But the learned behaviour will not be as good as natural behaviour.

3. Case study method has encouraged the use of several different techniques to get necessary information

4. It happens to be an effective means of describing a rare phenomena

5. Though the method doesnot allow us the opportunity to test the hypothesis, it does allow us the opportunity to get direction for further study and Research.

6. It has encouraged clinical innovation

Eg: Franz Mesmer (discovered) meanwhile the technique started known as Mesmorization (Hypnotism)

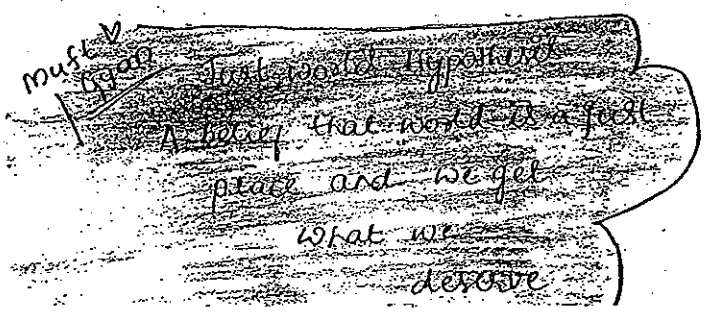
Freud along with charcot used hypnotism as an important therapeutic tool for the treatment of his patients.

In the same way, Freud & Breuer started "Talking cure" involving the cathertic release of pent up feelings and emotions eventually Freud developed free Association technique inspired by this (Talking cure)

Free association technique became popular after it was used succesfully to treat Anna'o''s hysteric paralysis.

Disadvantages:

Definite cause-effect relationship cannot be established
Extreneous variables are not controlled
Generalization is difficult as each case is difficult
Reliance on Retrospective data
So build up a case psychologist has to collect information from various sources and this enhances the scope of subjectivity in the findings.



SURVEY METHOD

It is a useful way of obtaing information about people, opinions attitudes, preferences and experiences by asking them questions. Survey method enables us to gather data about experience, feelings thoughts and motives that are difficult to observe directly. survey research data can be useful for making inferences about the behaviour though it does allow us the opportunity to test the hypothesis about causal relationship directly.

Survey method is quite an old technique that was developed in 18th century and is being used not only by Psychists but also by anthropologists and sociologists as well to study the behaviour of an event. In the recent years a variant of survey research called as the Sample survey has emerged.. It has become popular as it has turned out to be time, cost and labour effective method of collecting data.

In survey research the researcher is interested in assessing the concerned characteristics in the entire population. However in sample survey method only the sample that is representative of the population is studied and then the findings are generalised to the entire population.

Characteristics :

1. Survey research deals with attitudes and behaviours of the individual and therefore survey research must establish direct contact with the individuals. sometimes the data may be collected directly but in that situation the validity gets compromised

Indirect data collection represents armchair theorists/theory.

Therefore objectivity ↓ [data collected through journals]

In Psychal researches indirectness is a matter of degrees.

Everything is indirect infact, some are more indirect some are less indirect so we indirect ones are considered ∴ direct

Since everything is measured through behaviour, to determine traits measurement will always be indirect.

thus projective tests ↑ indirect than personality inventories

No matter what kind of expt method we use,

Environmental/extraneous variables - can't be held constant they influence the behaviour - inevitable..

However,

In implicit methods : Indirectness ↑ eg TAT, introspection

Explicit methods : Indirectness ↓ eg: personality inventories,

2. Researcher must be a trained personnel and must possess sufficient expertise over the behaviour being studied.

Researcher must have effective persuasive skills

Sucess of survey research depends upon the willingness and the co-operativeness of the sample being studied.

3. Research must have effective pursuasive skills

Sucess of survey research depends upon the willing and the co-operativeness of the sample being studied.

STEPS

1. objective clarification
2. Identification of the sample, this includes the discription of the sampling plan and the type of sampling method to be used
3. defining the methods, implies taking a decision regarding what method of survey will be used there is always a possibility that more than one method may be used the researcher should be aware of strength and limitations of the various methods.

4. Coding & scoring : Since survey research can result in a no. of lengthy responses with need to be summarised therefore it is essential that information generated should be properly coded, organised and arranged as only then the meaningful inferences can be drawn

5. Interpretations of the data and inference drawing.

TYPES :

Interview method : (view inbtween)

It is a conversation with the purpose and the purpose is to elicit relevant information from the [illegible] with minimum bias and maximum objectivity.

The interview neither tries to educate the subject or he tries to help him the aim of the interviewer is just to gather relevant information.

Hall & Lindzay, are of the opinion that there are three conditions that are necessary for a successful survey interview

1. accessibility
2. Cognition
3. Motivation

Accessibility :

Information required should be such that the respondent should be able to convey it to the interviewer without any hesitation or embarassment.

Cognition :

The understanding on the part of the respondent of what is required by him in other words respondent must know what type of information the interviewer wants from him and in what terms of reference he should express the required information.

Motivation

The respondent must be kept to provide accurate information.

Any successful interview requires the co-operation of the interviewee and interviewer the interviewer must carryout the process of interviewing without any bias. the interviewer shouldnot allow themselves become the victims of 'halo effect'

The interviewer must create a comfortable environment so that the respondents feel sure.

The success of survey interview calls for the interviewer being able to establish a rapport with the interviewee. and for this it is essential that the interviewee experiences unconditional regard from the interviewer. The interviewer should refrain from asking questions that are likely to sensitize the subjects and if for some reason he is compelled to ask questions on sensitive issues they should be presented in a manner that they evoke little or no anxiety in the subject

TYPES OF INTERVIEW.

Structured Interviews : fixed no. of questions are asked and in a fixed order, the pattern of scoring. the response is clearly defined and the interviewer has no freedom to deviate from the set order. Generally speaking the questions used in structured interview are close ended questions

Unstructured Interview : the interviewer exercises the freedom to ask any no. of questions and on any topic & area that he feels as being relevant to research or the question under investigation. The interview is not limited by time and therefore a detailed investigation on the area of concern is possible through this method.

Unstructured interviews happened to be the future of clinical investigation and they generally termed to be time, labour & cost intensive exercise. there is also a risk of interview turning lop / one sided and quantification of responses remains a challenge

Semi structured

It tries to combine the best features of structured and unstructured types.

Over here, the probable areas of investigation are predecided and likewise course is also reached at the beginning of the interview and the no. of questions to be

— some freedom however is provided to the investigator further if the need be. The scoring pattern is also well documented and therefore this interview method offers considerably high objectivity levels and at the same time offers some degree of freedom to the interviewer for a deeper probe if the need be.

QUESTIONNAIRE METHOD ?

always in the written form whereas survey method its 'oral'

→ Questionnaire method is used where factual information from the respondent is desired. It consists of a form containing a series of questions which respondent themselves have to fill that is provide an answer which according to them seems to be correct. Questionnaires used in survey research are usually constructed for a specific research topic and tend to test for current opinion & the pattern of behaviour.

A questionnaire may be personally administered to a group of individuals or may be mailed to the target group.

Myth Gyan → Questionnaires

- Questions are given to individual/target group.
- tester sits @ the back till the subject is done with it.
- Understanding ↓ [subject ka] not possible here.
- Semantic barriers are present

VS Schedules

- Questions to be answered are read out to the subjects and marks the responses given by the subject.
- understanding is ↑ better
- confusions are clarified on the spot.
- Semantic barriers are removed but interpersonal barriers may get introduced. (limitation) presence of tester is likely to affect behaviour.

Questionnaire Method

Economical comparitively.

If the target group is large

→

Schedules

Time cost labour intensive

minimum no of subjects.

- In a questionnaire there may either be open ended questions or closed ended questions, closed ended questions are also called as fixed response questions where as open ended questions are also called as free answer type questionnaire.

The closed questions are the ones that are to be answered by choosing any one of the limited no of alternatives. Open ended questions on the other hand solicit information about opinions and feelings in a way that the person must respond with more than a guess.

Close ended Questions are easy to quatify where as open ended questionnires provides the subject an opportunity to express his mind.

Advantages

- Economical
- widely scattered population can be quickly reached & data from them is easily collected
- The problem of interviewers bias gets eliminated
- subject has an opportunity to think and reply/answer they are in a better position to express their underlying feelings.

Disadvantages

- subject's version is the last word
- There is no way by which we can cross check the validity of the responses supplied by the subject
- Non response
- Semantic confusion may occur thus validity may get compromised due to the operation of semantic barriers.
- There is no opportunity to supplement the information with the available background data (i.e non verbal signals)

Disadvantages continued :

- where spontaneous replies are needed questionnaire method is not welcome.
- Problem of response bias
- Independence of the the responses gets compromised. because the person goes over all the questions before answering them
- This method ~~can be used only with the subjects who have knowledge~~ of the language. i.e can't be used for illiterates.

PANEL TECHNIQUE

Is a reinterview design in which the same sample is interviewed more than once.

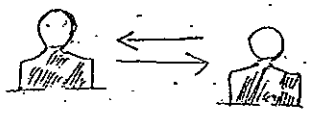
Advantages

- Reliability of a response can be ascertained
- Chance variables that operate to cause error in measurement generally cancelled out on repeated testings.
- The investigator can come to understand how variables that operate in the interval period bring about the change in the respondents behaviour.
- If the subject has got something extra to offer / communicate he can do so when interviewed again.

Disadvantages

- Attrition : loss of subjects over time
- Sensitization
- practice & memory effect
- time cost and labour intensive exercise.
- Transformation in the digital behaviour.

Telephone Survey



Respondents are interviewed by the investigator through the telephone

+Ve

Quick & speedy collection of data

-Ve

When investigator is not known to the subject they usually don't cooperate.

Only that section of population that has the telephone can be reached. So sample is biased & doesn't represent the true population.

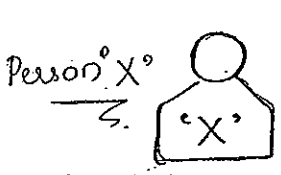
Longitudinal & Cross sectional method.

LONGITUDINAL METHOD

It assess the changes in behaviour in a group of subjects more than one point in time, in this method group of subjects are repeatedly studied at different stages and the changes that occur as they mature are noted.

~~this research is~~ conducted to examine age related changes that occur over an extended period of time.

(same person is studied)



studied → 2 years old ← studied → 4 years old → studied → 6 yrs → goes on...

Advantages

+ Enables the researcher to examine the ~~diff~~ relationship b/t early and late life events and behaviour.
+ It is a unique method as it enables the researcher to track the performance of the subject overtime
+ Since the same set of people are studied at more than one point in time therefore subjects act as their own control [subject himself is responsible for chaye in bhvr]
+ Method allows for cause effect speculation among the variables under investigation

Disadvantages !

+ Mortality [death of the subject]

Loss of subject overtime due to change in residence marriage

× Practice effect

Natural response of the

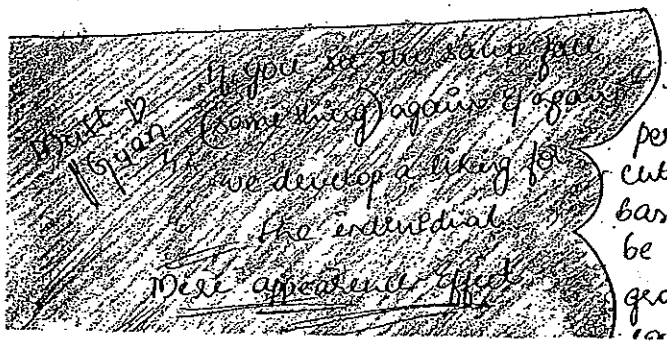
× subject gets alerted due to repeated testing

× Bias assimilation

As the research progresses sample gets biased further and further

× Cohort effect.

It refers to the effect of cultural & historical changes on the accuracy of the findings. Children born in a particular period are influenced by a set of cultural & historical conditions. Research based on the study of such children can not be applied to the group of other children growing up under diffent set of socio-cultural conditions



CROSS SECTIONAL METHOD

It examines several group of people at one point in time. In other words group of subjects of different ages are studied at the same point of time. this research is used to examine age related differences and how these differences influence behaviour.

Advantages	Disadvantages
Cost effect and labour effective method of investigation	Lack of comparability bet the groups that have been taken & considered for investigation.

Eg:

study the effect on media violence on children, one subject each

- 2 year old
- 4 year old
- 6 year old
- 8 year old

} are taken as subjects
we are forced to assume that 2 years old = 8 year old
But these are not equal in the actual sense

Lack of comparability is present

↳ Over here the researcher who conclude that age related change has occured must make special but unwarranted assumption that the behaviour of the younger subject reflects what older subjects were like at an earlier age.

↳ The research tells us nothing about the continuity of development on person by person cases.

EXPERIMENTAL METHOD

An experiment is a controlled observation of an event or a phenomenon. In an experiment certain conditions are arranged and controlled for the purpose of careful manipulation and meaningful inference drawing.

Doing an experiment allows the researcher to arrive at a causal inference about the behaviours and the experimental hypothesis. He tries to arrive at the potential relationship between the two variables,

1. IV - Independent variable
2. DV - dependent variable

TYPES OF VARIABLES IN AN Expt

INDEPENDENT VARIABLE : It refers to the event or condition taken up by the experimenter for manipulation inorder to see the impact it makes on the behaviour.
It is independent in the sense that it's values are created by the experimenter and aren't influenced by anything else in the experiment.

EXTRENEOUS / ENVIRONMENTAL VARIABLE : confounding V.
It confounds IV-DV relationship. Extraneous variables are not the part of experimental manipulation but they need to be controlled because they have the capacity to influence the behaviour being observed & measured. Thus they are likely to distort cause-effect relationship.

DEPENDENT VARIABLE

These are the outcome of manipulation of independent variables. They are called as dependent variables because their value is dependent upon independent variable.

1. Sources of confounding in the experiment can be the function of respondents behaviour, experimenter's behaviour or the manipulation done in the experiment, Explain?

2. The function of relationship blt the antecedent and consequent (Inde) (dep). variables determines the kind of research we are doing.

3. Intraneous variables are extraneous variables with organismic properties

4. Indirectness and incompleteness jeopardise the quality of Experimental research?

1 Ans ∴ Source of confounding could be,
- within the subject, Experimenter
- Environment
- manipulation done in the Expt.

Expt is nothing but communicn blt Expter & subject.
- ↳ Source characteristics
- ↳ Message
- ↳ Reciever
- ↳ Mode/channel of communication

{ Testing is what the tester comprehends not what the tester does. Reciever is important here not the sender.

when respondent dilutes the message/content its called —

when experimenter does it " —— , —— , ——

— Experimenter's Bias

Give an example for the same in the context of school, research field this we can draw multiple generalizations.

Intraneous variables are those variables within the organism that confounded the research / cause confounding in the expt.

Extraneous variable : In the Environment.
Note.. actually everything apart from the intraneous variables.

the main aim of the experimenter in any expt. is basically.
To reduce the discrepancies bt intended & perceived meaning.

Tester
testee → principle overlap then experiment becomes successful :)
testing

~~Complete overlap is not possible though~~

Barriers could be of 3 types,

If removed → Prejudice ↓ comes down.
- physical barrier — can be easily removed easily
- semantic barrier — " — " — " —
- Interpersonal barrier. difficult to remove.

↓ in prejudice calls for attitudinal change.

? is this important?

It allows the subject to express himself/herself
rapport gets stronger
subject should feel comfortable/secure in the expt setup.

A Teacher
Researcher
Experimenter
} should try to remove these barriers in the first place.

→

The success of any experiment lies in,

1. How effectively can the experimenter control extraneous V.
2. (variables) How skillfully can he manipulate independent variables.
3. How objectively can be measure dependent variables.

Extraneous variables
They are relevant, — Every experimenter should realize the significance of extraneous variables

irrelevant — not expected, welcomed in any expt.

EXPERIMENTAL DESIGNS :

Experimental design is a general structure of the experiment. It is a plan for assigning participants to experimental conditions and the statistical analysis associated with the plan. Expt design identifies IV, DV & EV and indicates the way in which randomization and other statistical aspects of the experiment are to be carried out. Expt design is a blueprint for carrying out expt research.

Fisher, has identified three principles of a good experimental design.

(RANDOMIZATION)

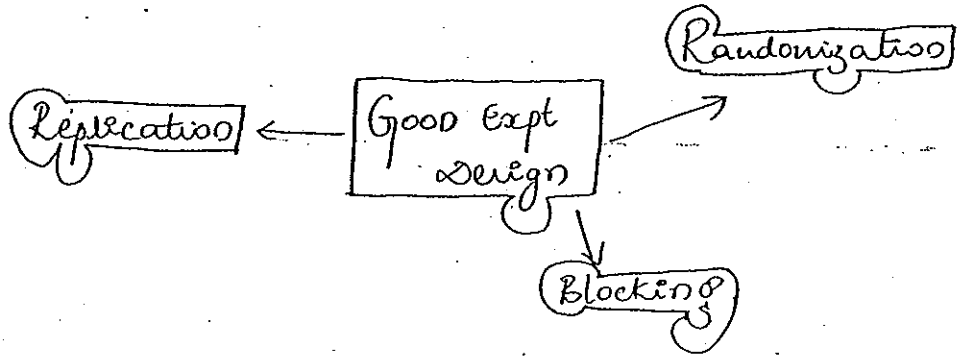
Randomization : Participants or the experimental units should be randomly assigned to the treatment level. It helps to distribute idiosyncratic characteristic of the participants over the treatment level so that they do not selectively bias the outcome of the experiment.

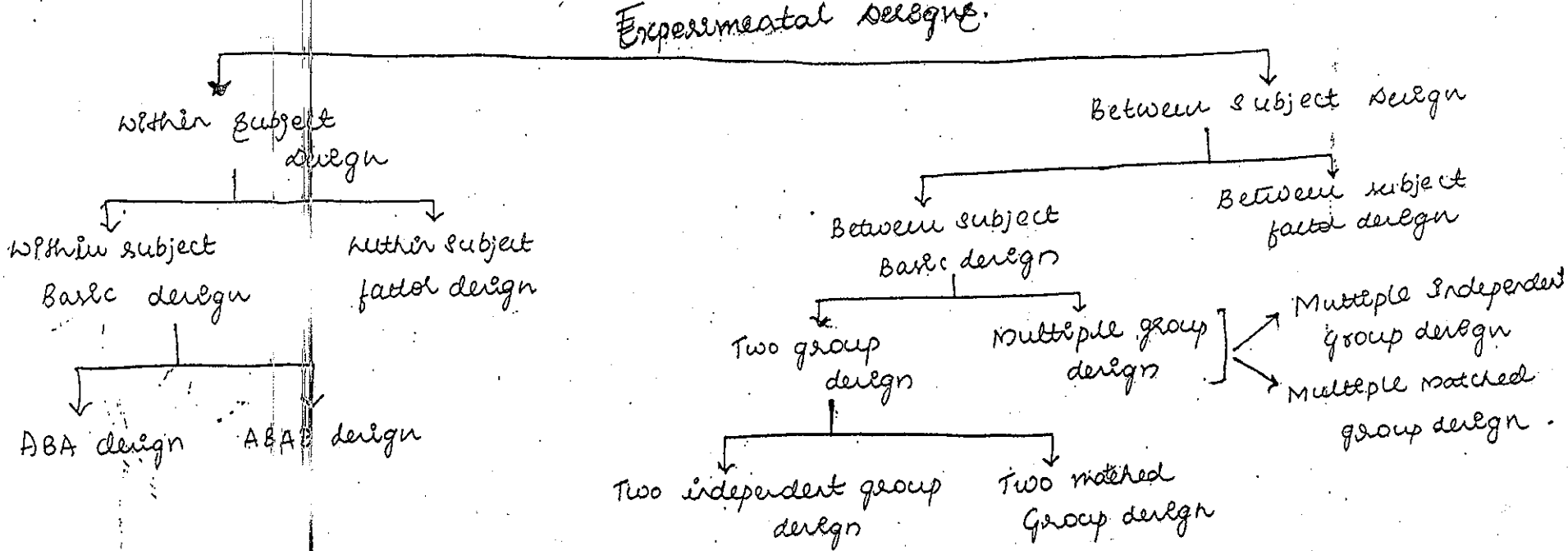
(REPLICATION)

Replication : It is the observation of the two & more participants under identical experimental conditions. It enables the researcher to obtain more precise estimates of treatment effects.

(BLOCKING)

Blocking : It is an experimental procedure for isolating variation attributable to extraneous variables, also called as nuisance variables.




Experimental designs
Within subject design
Within subject Basic design
Within subject factor design
ABA design
ABAB design
Between subject design
Between subject Basic design
Between subject factor design
Two group design
Multiple group design
Multiple Independent group design
Multiple matched group design
Two independent group design
Two matched Group design

Between subject design : More than one subject is needed.

controlled group + placebo → } observed
Expt group + Behaviour → } measured
compared

No. of subjects involved is the basis here

Basically to, establish cause-effect relationship.
IV – DV relationship.
provided the groups are comparable.

] Extraneous variables should be controlled by the expter

Basic Vs factor design

↳ pertains to no. of independent variables used in the expt as the basis for division.

I.V [alcohol
sleeping pill
alcohol + sleeping] multiple I.V.

} behaviour change. → Effects
alcohol alone
sleeping alone
Alcohol + sleep] interactive effect

Two Group design Vs Multiple G.D

Two group design] Expt group
controlled group

Vs

multiple group design → Expt g. I
Expt group II
Expt group III
Expt group IV
Expt group V
+
control group.

alcohol consumption + Marijuana → Effect on the subject. [Expt group]

controlled group

Alcohol + marijuana → Effect (placebo)

Expt g. I — alcohol + mj → Effect ↑ (High ↑ concⁿ)

Expt g. II — alcohol + mj → Effect m↑ (Moderate Contⁿ)

Expt g. III — alcohol + mj → Effect. (↓ m. concⁿ)

" — " — "

control group alcohol + mj – effect [placebo] =

Design, depends on no. of Expt'l groups available.
the hypothesis.
except

Independ Vs Matching
whether subjects are matched or Randomly selected is the

Within Subject Designs

Cond° 1

Subject A +

(Baseline behvr measured)

Cond° 2

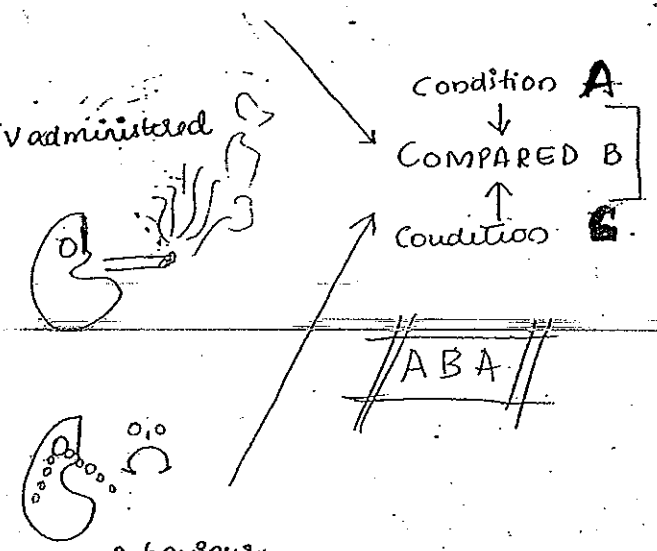
subject A

(Behvr measured followed the administrtn of independent variable)

Cond° 3

subject A

– Independent variable Removed



FACTORIAL DESIGNS

Factorial design is used to study two or more variables at the same time. These designs give us two kinds of information,

1. Information about the effect of each independent variable in an experiment – [main effect]
2. They also help us find out how the influence of one independent variable operates on other – [Interaction Effect].

Interaction effect tells us whether or not two factors [in other words independent variables] are interdependent.

Whenever an interaction is present in a two factor experiment we cannot get the complete picture of the result of the experiment without considering both the factors because the effect of one factor might change depending upon the level of the other factor.

TYPES OF EXPERIMENT.

Lab Expt Field Expt

LAB EXPERIMENTS

Controlled experiments that are carried out within the confines of the lab. Kerlinger has identified three purposes of lab experiments,

1. It aims to establish the relationship between IV & DV under pure uncontaminated and controlled conditions. and when this relationship gets established the experimenter is better able to predict the behaviour (DV)

2. Lab experiment helps us in testing the accuracy of the predictions made by the researcher

3. Lab experiment helps us in building theories and theoritical systems by refining the theories and hypothesis and providing the ground for scientific evaluation of these theories and hypothesis.

Advantages :

- Opportunity for hypothesis testing and theory building is present
- Experimenter is able to enforce administrative control through physical isolation.
- Opportunity for replication present and therefore conclusions reached can be verified again and again.
- The researcher can force the pace of research by making it unnecessary to wait for natural events to reproduce the appropriate scenario.
- Lab experiment allows the researcher to select when and where to conduct the experiment.
- Degreeous control over EV can be exercised, IV can be manipulated and DV be accurately measured. and as a

↗ It is possible to study single discrete variable and its influence on behaviour through the lab experiments.
↗ Cause effect relationship arrived at is to a large extent free from the contaminating influence of EV.

Limitations :

↗ Artificiality of the lab expt makes the generalizations of the findings difficult. [External validity ↓]
↗ Experimenter's bias and demand characteristics may operate to lower the validity of the findings.
↗ Cost intensive process of investigation
↗ Limited applicability due to practical difficulties in conducting the expt as well as the social and ethical restraints that have to be observed.
↗ Lab expt enable us to study the impact of one or two independent variables on behaviour but the lab expt turns out to be less useful in complex situations where there are many IV operating on the individual simultaneously

Must Gyan | Every pure research should have some applied value/utility.

Issue { Can independent variables induce/increase Extraneous variable?
Can effort to reduce EV can increase/reduce Extraneous variable.

Field Expt

Zechmeister has defined field expt as one in which the experimenter manipulates one or more IV, under naturalistic setting for determining their effect on behaviour.

Characteristics :

~~They are carried out in more or less realistic setting and therefore are less subjected to variability arising out of artificiality.~~

Because field expt is carried out in more or less naturalistic settings the stronger is the effect of variables under study and greater is the scope for the generalization of findings.

[i.e External validity ↑]

Researcher tries to manipulate IV and control EV but neither the IV manipulation and nor the EV control happens to be as precise and accurate as observed in lab expt

Eg: Robber's Cave Expt by Sherif et. al.

Advantages :-

1. ↑ external validity
2. ↑ practical significance
3. It is suitable both for study, testing as well as solving practical problems.
4. Expt variables have a stronger effect than that observed in lab expt because External validity is ↑
5. One can study how variables interact with one another to produce the impact on behaviour

↔ disadvantage

1. Limited applicability.
2. The expt menter must have effective social skills to enable him to manage the subjects in field settings.
3. As extraneous variables aren't rigorously controlled there is always risk that the cause-effect relationship arrived at carries some degree of contamination
4. Manipulation of IV & measurement of DV happens to be a far more challenging exercise for a F. expt menter than lab Expt

Experimenter exercises fewer administrative controls in comparision to what is possible in lab experiment.

Controlling Extraneous variables

Randomization It refers to a technique where each member has an equal and independent chance of being selected

this technique is used when the experimenter assumes that some extraneous variables exists but not in a position to specify them, he is therefore not able to apply other techniques for controlling extraneous variables this technique is also applied where extraneous variables are known and but can't be controlled by the known techniques.

The importance of Randomization lies in the fact that the technique distributes extraneous effects over the experimental and controlled conditions.

Elimination :

One of the simplest methods of controlling extraneous variables since it involves complete removal of extraneous variables from the experimental set up.

Constancy of condition :

Extraneous variables, when they can't be controlled via elimination they can be controlled by holding their values as constant for all the participants and in all conditions.

Eg: If light intensity is the extraneous variable then it can be controlled by holding light intensity as constant for all the subjects.

Constancy also applies to other organismic variables like gender age etc, to control such variables the researcher can

that those who participate in the expt are homogeneous with respect to these variables.

Matching

It is a technique where the individuals who are to become the part of experimental and control group respectively are compared and made equal particularly with regard to the variables that are likely to have influence on the behaviour that are not being chosen for manipulation. This method requires Comprehensive testing of the individual and the event of they not coming out to be equal they are eliminated from the study. In otherwords every subject included in the experimental group must have his matching subject in the control group and if that is not possible individual cannot be included in the expt al research. Though an ideal method it happens to be time cost and labour intensive mechanism of controlling extraneous variables.

Counter Balancing

Step 1 — Subject A made to remember a list of 20 words. → Performance 80%

Step 2 — exercise. Interpolitary duration

Step 3 — Colour naming + Joke R → perform - 40% ↓

Joke Reading + Colour naming ↓↑ → Performance 42% ↓

step 2 & 3 performance ↓ 40 & 42%; more or less same so no order effect.] ∴ order effect eliminated.

→

It is a technique for controlling practice and order effect by distributing the progressive error across diff treatment conditions of the experiment. This method is used to control the sequence relevant variables. The effect of E. variables is equalised by making a balanced distribution of the effect over different levels or values of IV thus E. variables are eliminated by presenting them in a different order along with IV.

This method comes into operation when each subject is required to serve under two or more experimental conditions and

there is a probability of participants performance improving due to practice & decreasing due to fatigue.
this technique is used to balance the order effect equally over all the conditions.

→ Controlling Extraneous variables is,

~~most challenging in social science researches~~

Matt Gyan ∵ we are dealing with human subjects, dynamic nature Extraneous variables need to be controlled invariably in Every type of research, social science research is no exception to this.

- Difficult to enforce control completely.
- Scope of cultural influence, semantic barriers ↑
- In social science there is an interphase b/t
  - Expter & subject.

→ Threats to I & External validity.

Threats to Internal Validity.

1. Mortality :- Refers to subjects leaving the research.
   → i.e Experimental mortality & attrition

2. History Specific Events :
   Events occuring between first and second Experiment and are beyond the control of the experimenter may have the detrimental effect impact on subjects performance.
   this problem to some extent can be overcome if the inter session period is kept short and sufficient precautions are observed to ensure that the subjects are not influenced either in positive / negative manner by the events that have occured in the rest interval

3. Maturation :

Maturational changes can become extraneous variables as they have the potential to influence behaviours particularly in the studies,

1. with longtime duration (longitudinal studies)
2. where the sample of subjects happened to be fast growing ones.

Threats to Internal validity continued

4. Testing.

The process of pretesting (b/f) the beginning of the expt can produce changes in the subject, it may produce practice effect and thus make the subjects more proficient in their subsequent performance. Sometimes it may cause fatigue which may lower the performance in actually testing condition. To control the effects of pretesting one must ensure that subjects are not overexposed to testing during their selection & the participation in the experiment. They should also be provided with enough rest so that they can start afresh. when actually expt begins.

Statistical Regression

It is also known as regression to the mean (Average) It is a phenomenon that sometimes operates when the subjects are selected on the basis of extreme scores. and the measurement device is not completely reliable. Subjects who score very high on the pretest (actually) are likely to score lower that is near the mean in the actual test and viceversa. If this is allowed to happen it will cause error in measurement and therefore it is recommended that the researcher should avoid extreme selection.

DEMAND

Refers to the totality of the clues available to the subject test which interact with his nature to confound the dependent variable the subject tries to behave in a particular manner so as to make what the manipulation is

Demand characteristics have been investigated by Orne who found them to be a powerful source of bias in a real Experiment. He observed that subjects entering the psychological experiment have some general notion of what to expect and they act accordingly.

Good subjects try to guess the hypothesis and display behaviours that confirms the hypothesis.

Apprehensive subjects try to present themselves in a favourable light

Negativistic subjects try to behave in a manner that serves to disprove the hypothesis.

Faithful subjects try to follow instructions meticulously and honestly.

Demand characteristics and their effect got deprecated by Hawthorne Expt by Elton Mayo et al.

Hawthorne Expt :

working conditions on behaviour of workers

Light intensity (IV) — productivity (DV)

productivity ↑ when light intensity was increased from poorly lit ⟶ optimum light.

With the gradual increase in the light intensity productivity went up But surprisingly, when the light intensity was decreased productivity did not come down. Unless the light intensity was as low as a moonlit night.

So what made the workers work, / retain the productivity rate,

- A sense of importance they felt
- A sense of being observed.
- Relationship b/t the workers and managers.

It was a path breaking study/Expt ⟶ gave new insights in the (area) of social life of workers.

Before this Taylor gave the concept of Scientific management based on his expt suggesting that time elimination of time and motion movement. But man became machine.
Workers felt that, more is expected from them. (Demand)

→ Hawthorne experiment became famous because it highlighted the importance of small group in the life of the worker. This experiment also demonstrated social nature of man and therefore suggested to management experts the importance of non-material rewards along with the material rewards in shaping the behaviour of the worker.

Combating demand characteristics.

1. Automated Labs computer labs. ↓ human interaction ↓ subjectivity ↓ objectivity ↑

2. Single blind approach eye of the subject has been taken away i.e subject is not aware that whether he is a part of experimental group or control group.
In other terms we have introduced placebo.

3. It is a procedure where in the experimenter running the experiment is aware about the crucial aspects of the expt but the subjects participating in the expt are not aware of these aspects.

4. Deception.

EXPERIMENTER'S BIAS / EXPECTENCY / EFFECT.
PYGMALION EFFECT. / ROSENTHAL EFFECT

It refers to the experimenter influencing the outcome by providing the subjects the cues about his expectations perhaps without realising it, the experimenter might provide the subject the cues that would suggest to the subject how Experimenter wants them to behave. Subjects often complain with the subtle requests made by the experimenter and may provide him the data that he is seeking the experimenter knowingly or unknowingly is able to exert

Confounding in the Expt.

Generally speaking the behaviour of the experimenter is driven by unconscious process and sometimes it could also be intentional. Experimenter bias is not limited to human subjects alone, It can be seen in operation with the animal subjects as well.

~~The pressure on the experimenter to get the results to~~ Validate their hypothesis is enormous and therefore they are alerted to display certain behaviours either explicitely or implicitely that may lead to the result that is likely to support their hypothesis. By conveying their expectations to their subjects the experimenter may try to change their behaviour in the direction of their hypothesis. There are so many ways by which experimenter bias may occur. The experimenter might make an error in recording the data from the experiment he might also treat the subject differentially depending upon what we expects from them for example he might give more time to the subject that have gone through a particular treatment. The damaging effects of Experimenter's bias were demonstrated by

Rosenthan & Jacobson in their study

"PYGMALION IN THE CLASSROOM" [Experimenter's expectancy]

Rosenthan & Jacobson went to random classrooms and identified 1 childrens in each classroom as "Bloomers". Though it was randomly done, It had an impact on the teachers.

Surprisingly the intelligence of these students identified as bloomers ↑ though the students did not change dramatically.

change could be due to the constant attention given by teachers to students.

⇒ Can be applied with "Teaching the / o disadvantaged groups

Through their work Rosenthal and Jacobson showed that how the teachers preconceived notions about the ability of their students brought about changes in teacher taught Evaluation Teachers created warner climate, gave more feedback and taught more relevant information to the students from whom they expected positive results. Infact it was also observed that the teachers expectation influenced their behaviour to such an extent that the students to some started moving in the expected direction even though the student had not significantly changed.

How to overcome Experimenter's bias

1. Automated Labs
2. Double blind Approach: is a procedure where neither the subject nor the experimenter happen to be aware of the crucial aspects of the experiment.

THREATS TO EXTERNAL VALIDITY

1. Artificiality :
2. Interference of the prior treatment : In some expt the effects of one treatment may be carried over to the subsequent treatment.
3. Interaction effect of testing : The use of pretest before the begining of the study may sensitize the subject and provide him the stimulus for change.
4. Extent of treatment variation : due to the potential threat of the experimenter bias, most researchers have research assistants who are not directly involved in the formula tion of research hypothesis deliever the treatment to the subjects. this is a potential threat to external validity as the question can always be asked that whether the treatment was administered the way desired by the experimenter.

The experimenter therefore must have verification procedure to make sure that the treatment was properly administered.

or 5. Interaction of selection & treatment : Researchers are rarely / never able to randomly select sample from the wide population of those interests & randomly assign them into groups. this implies that the generalizations ~~cannot be effectively made~~ due to the biased nature of the sample.

Q.8. How do you conduct an expt to study the effect of instruction on students in a school ? } 10 marks

Value judgement should be removed/not encouraged in any expt both from the side of subject & Experimenter.

It dilutes the objectivity.

Expt Response/bias
subjects bias
demand characteristics
} are all the results of value judgement
eg : why is that our "small family plans fail — value judgement.

Quasi - Expt Research / Method

Quasi expt research method is a specific research method primarily used in a social science research. It shares some characteristics of true experiments but it differs from the true experimental design on two important characteristics,

1. Complete manipulation of IV not possible. This can also be ~~situations where no IV manipulation is not possible at all~~ situations where it is not possible to allocate subjects randomly to various groups.

A quasi-experimental research becomes non expt when,

Quasi → non expt.

- IV manipulation not available
- Groups taken are not comparable with each other

Quasi - Expt method is also called as a natural expt since the researcher exploits the naturally occuring differences in IV. Occasionally an unforseen event in the environment permits natural event to be studied by using quasi expt designs. However it must be admitted that in the study of natural events controls are absent and IV manipulation optnn limited or absent. Sometimes the hypothesized cause of such is either difference has already occured and when this happens quasi exptal method gets closer to non experimental methods particularly Expost facto method.

For example if we look at the difference between men and women on verbal ability the probable cause of this difference that is the independent variable of gender has already occured. In other words group assignments have already taken place and we have no control over who will be in which group. since sex is predetermined.

The pre assignment of groups & the treatment introduces as major shortcoming in quasi expt/ research, it lowers the power of the experimental to arrive at cause effect relationship.

Inspite of this short comings Quasi-Expt method continues to be carried out because Quas Expt method cannot be applied to study many of the human behaviours for the reasons of practical, ethical & social constraints.

Dennis &

~~Dennis expt on Hopi tribe in America~~

~~traditional Hopi kid tied to cradle~~ } Two groups naturally occuring.

Americanised Hopi's – free to move not tied.

Q. Question:

Is walking a maturational behaviour?

Observation: By the time children were 15th months old both started walking.

children tied to cradle & who were not tied } both could walk, didn't show any difference.

Proved?

Locomotion in children is maturational

Adams & Adams,

studied the inhabitants of a small town Othello to find out how eruption of mount St. Hallin's volcano brought about changes in their behaviour. Adams and Adams found that there was 50% increase in the incidence of mental illnesses 108% increase in the stress induced illness and 235% increase in general mental Health disturbances following the eruption of the volcano.

Types:

1. Non equivalent Pretest-post test design.

Group I + Treatment → outcome measured through Post test
Pretest

Group II + No treatment → Outcome measured through Post test
Pre test

} Comparision made

Groups are non-equivalent
∵ Randomisation not possible.

Discuss through Quasi-Expt method on the impact of T.V on Rural population.

→ In this design the researcher to begin with, through the medium of pretest tries to arrive at the baseline behaviours of the two groups then after the treatment (TV) has been provided measures the behaviours again and evaluates how the behaviour of the treatment group compares with the behaviour of the group which was not provided with the treatment.

Since the groups happened to be non equivalent to start with, cause effect relationship remains speculative.

2 Non Equivalent post test only design (only)

This design consists of administering an outcome measure to two groups one of which happens to be a treatment group and the other group which is similar to treatment group but has not received the treatment.

A major problem with this design is that the two groups may not necessarily be the same before the instruction of the treatment takes place and therefore there is very possibility that the underline difference between the group was responsible for the differences in the performance is observed.

5. Time series design

Group I Pre eg say volcanic eruption Post.

pretest pretest pretest — before 6 before 1 before 2 —— 2 month 1 month 6 months
I II III month month month after V.E after V.E after V.E.

Group II

pretest pretest pretest
I II III

Several assessments are obtained from the treatment group aswell as the parallel group recieving no treatment. These occur prior to and after the application of treatment. The series of observations before and after can provide rich information about the changes that occur over time in the subjects who have recieved the treatment and how these changes compare with those subjects who have not recieved treatment.

Advantages Quasi-expt methods -

1 External validity is high

As the element of artificiality is low External validity is ↑ it implies that the findings obtained can easily be generalized to other similar situations.

2 Where for ethical and social reasons true expt is not possible investigation can be taken up through quasi-expt method.

3 It is much less demanding than expt method with respect to time-cost and labour.

4. The research is easy to carryout as randomization is not possible. because the groups to be studied are already naturally organised.

Lenges :

ternal validity low,
Extraneous variables control absent
use effect relationship is speculative.
manipulation not possible (extremely difficult)
naturally occuring situation which the researcher wants to
~~study~~ occurs rarely.

Designs :

They are so named because, they allow some of the basic
tial steps but fail to include the control group.

ne shot case study

Group + Treatment → Post test to measure the outcome.

Pre group pretest post test study.

Group + Treatment → Post test to measure the outcome.
Pretest conducted to
tablish Baseline Behr

RESEARCH AND ITS TYPES :

Systematic application of a family of methods to provide trustworthy information about the problem.

OR

Research can also be defined as ongoing process based on many accumulated understanding and explanations that when taken together leads to generalizations about the problem and the development of theories.

Kerlinger has defined Research as "A systematic controlled and critical investigation of hypothetical propositions about the presumed relations among the natural phenomena.

Characteristics of Research

1. It is always directed towards the solution of the problems. [human behvr is always a goal directed behavr]
   ∴ human existence has a propose. We won't invest our energy on something aimlessly. principle of conservation of energy
2. It is based upon empirical, observable evidence.
3. It involves precise observation and accurate description.
4. It gives emphasis to the development of theories, principles and generalizations which are very helpful in accurate prediction regarding the variable understudy.
5. Research is characterised by systematic, objective and logical procedures. Researchers try to eliminate biases to ensure objectivity
6. Research is marked by patient, courage and unhurried attitudes
7. It requires that the researcher has full expertise over the problem being studied
8. Research is replicable so that other person can also asses the validity of research findings

It requires the skill of recording and reproducing the exact

STEPS :

1. Definition of the problem / Problem Identification.

The researcher discovers & arrives at the problem and gives it an operational definition. Operational definition specifies the experimental hypothesis adding to the actions & the operations taken up by the researcher to make an observation.

2. Formulation of Hypothesis

Hypothesis is a kind of suggested answer to a problem and can be defined as a tentative statement showing the relationships among the variables under study.

3. Identification of crucial variables

IV, EV & DV are the crucial variables

4. Formulation of R. Design

Research design is a blue print of those procedures which are adopted by the researcher for testing the relationship between IV & DV. Research design enable the researcher to manipulate IV freely and provide for maximum control over EV.

5. Constructing devices for observation & measurement

Two most possible devices are,

1. Questionnaire
2. Interview.

6. Summarising results

So that suitable analysis can be made

7. carrying out Statistical analysis.

8. Drawing conclusions.

Making a statement about the problem.

Eg:

Learning disability in children & how does it affect the academic performance of children

steps would be,

Define :

operational def : level of under performance in maths in children with learning ability ~~compared to normal children~~

level of verbal ability [includes spelling, comprehension] etc

" " " " " "

operational def facilitates scientific activity.

Operational definition should be there in,

- The variables being studied
- Research problem
- Hypothesis constructed.
- Research method used and wherever possible.

Hypothesis

There is no difference b/t children with L.ability & other children in terms of reading performance.

Select a R. design method.

define the problem

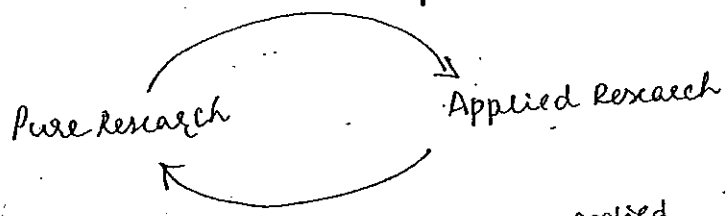
Hypothesis Formation

R. design.

Must Qsn || Discuss the methods deployed by Egists in social science research ?

1. FUNDAMENTAL Vs Applied Research

Fundamental (Pure)	Applied Research
done in lab	done in field
Concerned with theory development	concerned with.
~~Theory development~~	Skinner's operant conditioning became the basis for Behavioural therapy
Tries to find out Why & How?	the fundamental research
It produces concepts.	become → Applied Research.
It enriches the bases of a discipline.	Fundamental → Applied R.
Is n't interdisciplinary. studies from the focus of one discipline.	Report will be in layman's language
Reports in technical language.	concerned with What works?
Eg: Skinner's operant conditioning done through the expt on Rats.	can involve programme evaluation
	Several disciplines will collaborate



- Pure Research → Applied research
  - ⊙ Freuds Psychoanalytical theory → Applied → Projective tests
  - Eg: ⊙ Skinners operant Cndn used as base for Behaviour therapy.

Applied R → Pure Research ? Explain.

YES. Eg: Construction & reconstruction proces in human memory.

Later on proved with the instance of Testimonial { ↓ Eye witness. }

So the experimenters went back to pure research.

& reduced brought down to the proces - construction & reconstruction in human memory.

Action Research

Kind of Applied research only.

Over here the customized / local problem which needs urgent intervention we usually go for Action Research.

Next Level

|| Can we have a treatment procedure developed through ~~applied Research without the help of knowledge of fundamental~~ Research. i.e without ~~theoretical basis present~~

Answer : Yes. There is a possibility of this happening.

Since we donot have the theoritical foundation / basis of it we cannot generalise the findings however important interesting finding it may be.

eg: ⊙ placebo effect on patients.

⊙ Neo five factor inventory developed based on the Big 5 personality factors, which actually has no theoritical foundations.

But it will be,

Contextual in nature rather being Objective / universal application -

That is why, behaviour therapy is widely accepted.

→

Diagnostic and prognostic research are primarily used in the field of medicine but recently its use has been extended to psychology particularly psychiatry. Diagnosis is the identification of the nature of anything either by the process of elimination or any other analytical method. It is through the application and experience the diagnostic research is used to arrive at the possible cause effect relationship. Diagnostic Research determines the frequency with which something occurs. It is associated with something else. It tries to determine association among the variables. It is concerned with some behaviour which is presently being displayed or observed though the cause of the behaviour has manifested prio

producing its effect. In diagnostic research the researcher must be able to define clearly what he wants to measure and must find adequate methods for measuring it along with clear cut definition of the population he wants to study.

The research design for carrying out diagnostic research must make enough provision for protection against bias and must maximise reliability with due concern for the economical completion of the research study. The design in such studies must focus attention on the following,

1. Formulating objectives of the study
   why I am I doing this
   what observation should be made?
2. Designing the method of data collection
   Say which method Questionnaire, interview, survey
3. Selecting the sample.
4. Collecting the data
5. Processing and analysing the data
6. Reporting the findings.

Clinical & case study method used in Psychology is adopted in diagnostic research. Sigmund Freud carried out diagnostic research using this method and was able to arrive at the critical variables that contributed to the distress of his patient Frauline Elizebeth.

Diagnostic research in clinical psychology has enabled the researchers,

1. To arrive at certain conclusion regarding the presence or absence of disease
2. Supporting the clinical management.
   (arriving at the treatment decisions)
3. Assessing prognosis as the starting point for clinical follow up and informing patients.

4. Monitoring the clinical course (when the disease is untreated & during & after the treatment.

PROGNOSTIC RESEARCH

Prognosis is the process of predicting the future state of the system. Prognostic research includes the study of variables ~~predictive of future events. Prognosis can be defined as the~~ knowledge about the probability with which the prospective course of a particular event such as the health state of an individual is associated with persons profile at a particular antecedent movement in time.

→ "What kind of person has a disease is more imp than what kind of disease person has"? critically evaluate

Diagnostic — Prognostic R.

Must & Given // what disease ? what kind of person?

Personality profile of the patient is also important.

How two are interconnected

→ Prognostic Research finds its more important application in clinical psychology and its main objectives are,

1. To help in making decisions (clinical generally) regarding treatment, selection and counselling.

2. To improve the understanding of the course of events [disease process] that are likely to follow

3. To improve the Research design and the process of analysis.

4. To identify the risk groups

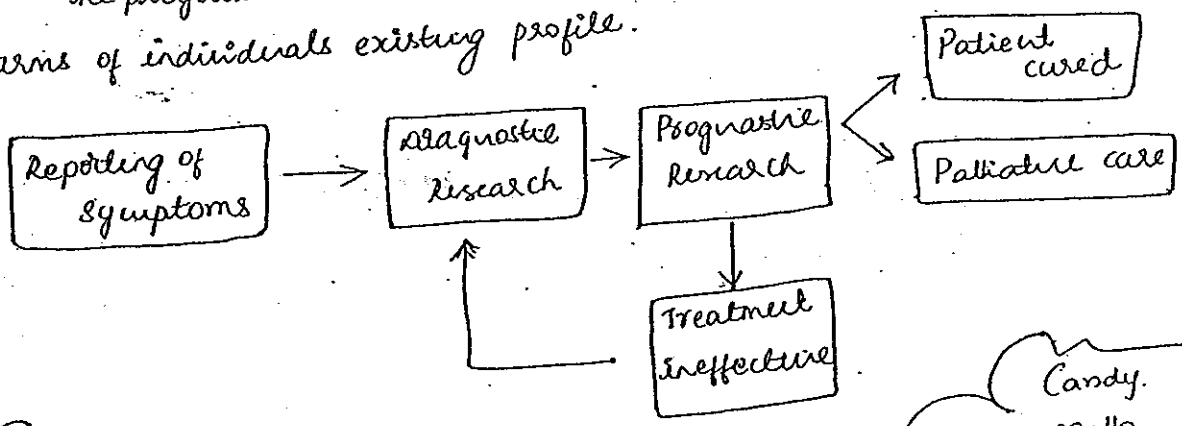
5. To predict the event outcome more accurately and parsimoniously

In its bid to achieve the above mentioned aims prognostic research tries to answer two pertinent questions,

1. were certain treatment to be applied would a certain result

2. Given the treatment is adopted will a certain course of events occur

The prognostic research tries to answer these questions in the terms of individuals existing profile.



GROUNDED THEORY

Glaser & Strauss developed this theory.

Wrote a book called, "The discovery of grounded theory"

It is a qualitative Research tool.

Theory is developed inductively from the corpus of data

Also called Emergent theory "[here theory emerges from the data]"

Involves reverse Engineered Hypothesis.

Constant comparision is the heart [central principle] of the theory.

Compare & contrast

Grounded theory & Field study?

Datta Gyan

Datta & Gyan

Candy. Marsh Mallo Expt by Walter

Concept of Delayed Gratification.

Expt done on children - longitnl

Grounded theory takes a case rather than variable perspective Elaborate ?

Grounded theory

Grounded theory is Qualitative

no no involved (non numeric)

Qclag ~~Quantitative it looks for comparison~~

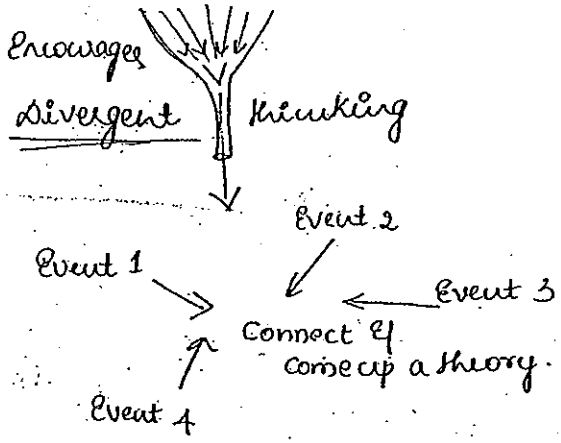
Generalisation is the aim

Comparision enables/allows generalisation.

Focus is on discovery of theory & not on verification of hypothesis

Inductive approach

g:- one instance → Generalize



Very difficult (∵ Syathesis)

Its like without a map go an an Expedition in a unknow place hoping to find a way.

Not many succeed.

Generally not advisable

would be the last Resort always.

Field study / Expt

Quantitative in nature.

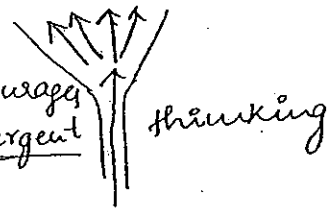
Comparision is not present but doesn't aim at Generalisation.

Intensive examination of the variable under observation.

It could also be Qualitative in nature.

focus is on verification of Hypothesis.

Hypothetico deductive approach



One Event

Intensive Examination.

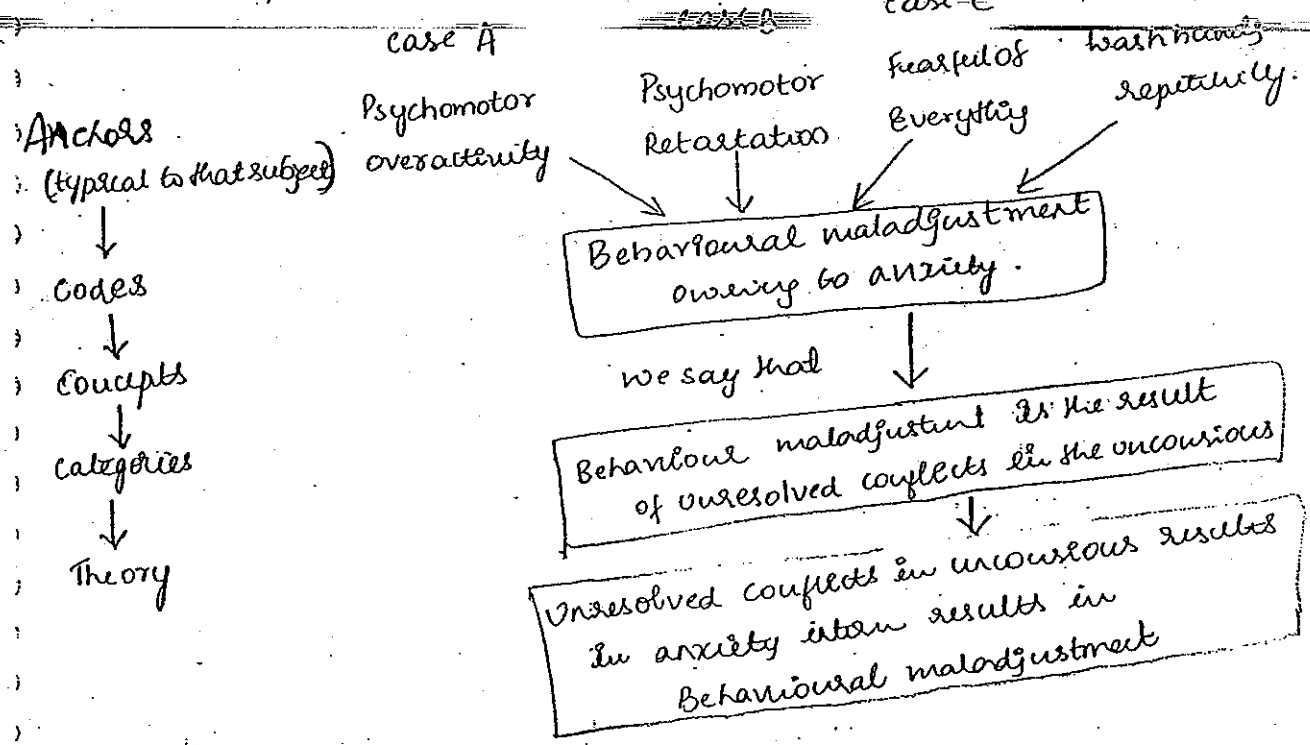
More scientific, systematic.

- Analysis

It takes a case rather than variable perspective.

Cases are the wholes in which variables interact as an unit to produce an outcome.

Eg: say Freud's method, took a case cured, another cured and so on, thus case as a "whole" individual cases, subjects are units Variables which interact.



According to Strauss & Corbin, there are four requirements for successful grounded theory,

1. It should fit the phenomenon
2. It should provide understanding & be understandable
3. It should provide generality i.e be applicable to wide variety of Context
4. It should provide control in other words it should be clearly stated in which conditions the theory applies and the theory should provide a reasonable basis for action.

Brain Storming

the ability to create a novel and productive solution to a problem — creativity.

Brain storming is one method — creativity.

Brainstorming was invented by Osborn, first mention of brainstorming was in his book, Applied Imagination.

It is a technique of Deferred judgment.

Evaluation and imagination cannot go together so let us postpone (defer) judgment.

? ∵ Imagination — Subconscious mind
Evaluation — Conscious mind
} One is hampered when the other is active.

Creativity is nothing but divergent thinking thinking outside the box.

Eg: Box as a tool — Divergent thinking
Box as a container — Convergent thinking.

Along with divergent thinking, the individual should have
Personality backup — being non conformist
non judgemental

In adults,
Conscious thinking hampers creativity.
conscious mind always takes rationality into account,
value based judgement.
— Quality & sheer quantity (so many crap thoughts or the
ones a noble idea)

— No criticism
— Unusual ideas are welcome
— Combination & improvement of ideas is sought.

People ← [— Facilitator / moderator } Participants
— Idea owner

— OR —

Moderator

Facilitator

Participant

Brain storming

Idea collected

Moderator:
- makes sure everyone participates (Bring participants on track)
- ~~extract people open up~~ (Inhibitions are dropped)
- Lead the session

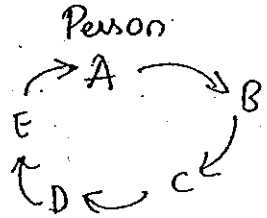
Idea collector:
- note down the ideas generated properly.

Steps:
1. warm up
2. Problem presentation — Giving problem beforehand / " — " On the spot
3. Idea Generation
4. Idea collector recording the ideas
5. Elaboration on the ideas
6. Idea discussion
7. Solution reached & thanks giving.

Sub Types:

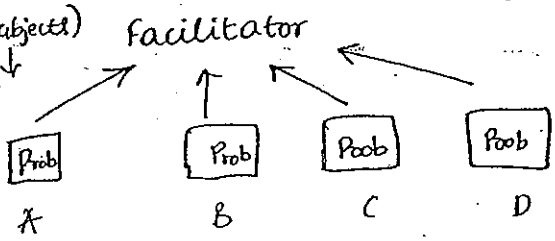
Group passing techniques.

→ Sit in a group
→ ideas passed
→ accept / condemn
→ accepted idea – selected for discussion



Electronic Brain Storming through Emails.
Modern trend
? Advantage
Anonimity.
Quicker process
large popul°

Mail problems to everyone (subjects) for evaluation
You get all the other ideas
sent it back with suggestions
Best idea selected



Nominal Group Technique (NGT)

Face to Face involvement of the participants.

Sense of participation ↑

Dutt Gyan

discuss the dynamics of Brainstorming & How are they similar to focus group discussion & Group therapy?

Brain storming	Group therapy	F.G.D.
Idea is to arrive @ a soln that is creative Originality of Response is important	Find a solution to the problem in hand focus is @ enabling the individual to adjust better	Find a soln to the Problem in hand Genuineness in the response is important

Common: Group dynamics is involved in all the three

- One common idea, the principal role is played by moderator
  Focus is to remove the inhibitions.
- Behaviours displayed in group settings are different from those displayed in individual setting.
- Group situation simulates social reality much better than individualized setting (Transfer of training better)
- Based on the principle of Economy { time, labour, cost }
- Motivation ↑ in group., people influence & get influenced
- Group pressure to be used on a member who doesn't confirm to the norms of the Group.

Limitations:

- How to get the participants, like minded people.
- participation of each member ? possible ?
- Homogeneous group ?! , ☺ ✓

B+ H, F,

creative thinking might not lead to creativity

Descriptive Vs Evaluative Research

Descriptive R

Eg: Case studies.

work on probable cause effect relationship.

Evaluative R

Eg: Applied R.

Exploratory, descriptive & explanatory.

Controlled Evaluation done

Discuss programme learning method & evaluate it results/process in teaching learning disabled.

Evaluative
- Formative
- Summative

Etc.

Step: 1] Need Assessment

It is the discrepancy b/t "what is" and "what ought to be". Data collected on these needs can be quantitative & qualitative.

2. Programme design:

A programme is designed to meet the needs of the target group. Programme development as far as possible should be theory driven

3. Implementation & progress Evaluation

In this judgement is made whether or not programme is operating as it was designed to and whether or not it is reaching the designated target population.

4. Outcome Evaluation is conducted when the programme is mature enough to have a stable outcome for a no. of participants. Assessment of both the impact as well as the efficiency is done.

Impact assessment analyses the extent to which the programme is causing the desired changes in the target population.

Past Gyan

Behaviourism ← Radical Behavr
Neo Behvr

Radical behaviourists → Watson, Skinner I/O/C, Thorndike, Pavlov C.C. → S-R Ψ

Behaviourism → Environmental determinism

Manipulatable determinants of human behaviour lie outside the individual in his environment.

Disagrees (?)] Father of Behaviourism in actual sense.

Associationists · Thorndike, Watson, James Mill, Timpérists?)

Also talk of association b/t stimulus & Response.

Trial/gradual — conditioning.

Neobehaviourists ·

Expectancies play a role in determining the behaviour of an individual.

Expectancy: positive Expectancy, Negative Expectancy] Created Based on experience.

Gestalt Ψ

Field view, Isomorphism.

Learning

1. classical conditioning & its applications 60
2. Instrumental/operant conditioning & its application 60
3. classical conditioning Vs operant conditioning 60
4. Observational learning 60
5. Social learning 60
6. ~~Cognitive learning 60~~
7. Tolmen's Cognitive learning theory 60
8. Gestalt approach to learning 30
9. Information processing approach to learning 30
10. Programmed learning 60
11. Self instructional learning 30

↳ Generalization 20
↳ discrimination 20
↳ Extinction 20
↳ discriminational learning.
↳ Escape learning
↳ Avoidance

Definitions:

Learning refers to relatively permanent change in behaviour that occurs as a result of practice & experience

- change in behaviour may be < Good / Bad
- change is either due to practice & experience any changes @ in behaviour which are not due to practice/experience is not called learning — they are referred to as "Maturational changes"
- Change has to be relatively permanent.

Learning will be performed (shown in performance) only when conditions are right/appropriate

say when there are incentives.

learning may/maynot be shown in performance.

Kimble, Learning is a relatively permanent change in behaviour or behaviour potentiality that results from experience and cannot be attributed to temporary bodily changes such as those (fatigue) induced by fatigue, illness or drugs.

CLASSICAL CONDITIONING:

~~A type of learning in which a stimulus acquires the~~ capacity to elicit a response, that was originally elicited

It is a form of conditioning in which a neutral stimulus comes to produce or cause a response through its association with the stimulus that naturally elicits the response.

Eg: natural response to food is salivation.

A procedure where in the responses that are customarily elicited by one stimulus are also elicited by the substitute stimulus when the substitute stimulus is paired with the original stimulus by presenting it just prior to the original stimulus over a no of trials

Before conditioning
Bell (neutral stimulus) → No response
Food (Unconditional stimulus) → Salivation (Unconditional response)

During conditioning
Bell (CS) + Food (US) → Salivation (Unconditional response)

After conditioning
Bell (CS) → Salivation [UR]

Pre conditions required

→ There should not be a long time gap b/t stimulus presentation (neutral) & the unconditional response which is paired with it.

These paired stimulus should be presented consistently for a period of time.

Unconditional stimuli (US)

In classical conditioning it is the stimulus that elicits the unconditioned response the first time it is presented.

Conditioned stimulus (CS)

A stimulus that is repetatively paired with unconditional stimulus

Unconditioned Response (UR)

response that is elicited by unconditioned stimulus.

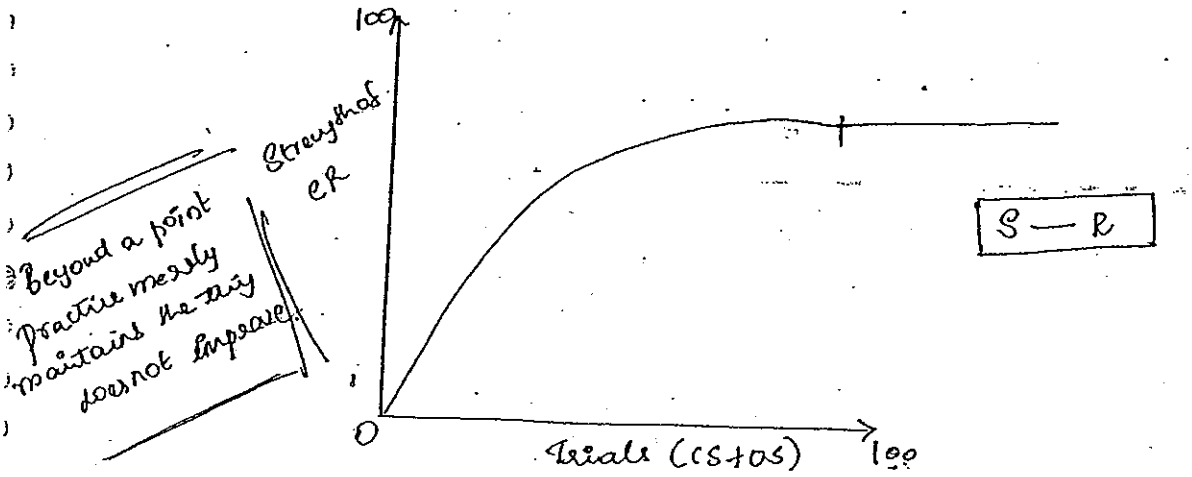
Conditioned Response (CR)

Response elicited by conditioned stimulus.

Classical conditioning is based on two important principles

1. Contiguity : implies that, closer are the stimuli in time and space, stronger is the association between them

2. Practice : The more are the no. of practice trials the stronger is the association b/t the two stimuli.



As observed in the graph, Once the relationship b/t stimulus & Response is established over time with adequate no. of trials, it can be said that there will be no improvement in the learning/association mode, practice only helps in maintaining the behaviour learnt and no improvement is possible after beyond a point of time.

Laws of classical conditioning

1. Law of Acquisition.
2. Law of Extinction
3. Law of Generalization
4. Law of Discrimination.

Acquisition is the process of acquiring a response. In most instances of classical conditioning it is a gradual process in which CS acquires the capacity to elicit CR as a result of sustained pairing with 'US'. By the time the acquisition period is over the response gets firmly established in the behaviour pattern of the organism. Acquisition & conditioning is influenced by many factors,

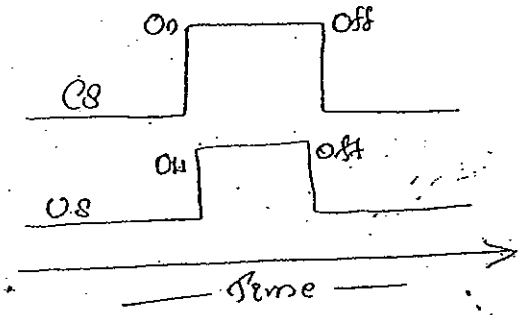
1. practice, refers to the no. of CS, US pairings
2. Temporal arrangement of CS, US pairing.

this implies the extent to which CS precedes/follows the presentation of US depending upon temporal arrangement there are four different types of acquisition & conditioning,

1. Simultaneous conditioning
2. Delayed conditioning.
3. Trace conditioning
4. Backward conditioning.

Simultaneous Condn

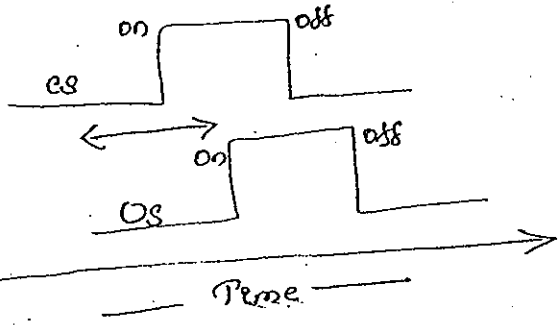
A form of conditioning procedure in which CS and US begin and end together



In this method, In order to know that whether the animal has made an association b/t CS & US we need to conduct a seperate trial in which US is held back

Delayed conditioning

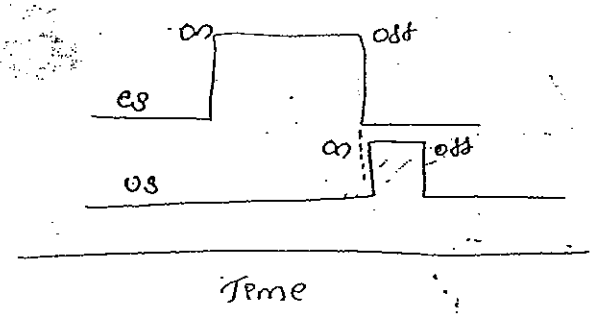
A kind of forward conditioning procedure in which the presentation of CS precedes but overlaps with the presentation of US. CS is presented several seconds prior to US and to investigate whether or not animal has formed an association. No seperate trial is needed.



CS precedes US

Trace

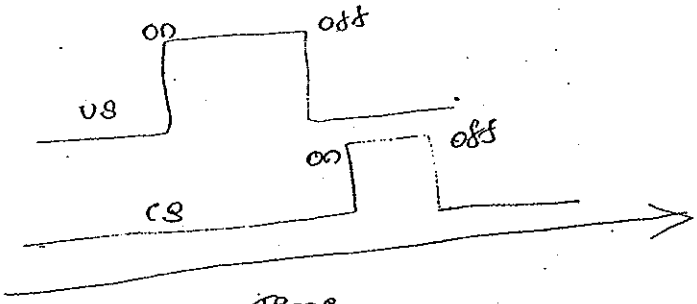
A form of forward conditioning procedure in which the presentation of CS precedes but doesnot overlap with the presentation of US, in other words US starts sometime after the presentation of CS. It is called as trace conditioning because in this procedure conditioning depends upon trace of CS left in the nervous system which persists until US appears. Actual CS has been turned off and therefore is not directly stimulating the organism. What animal responds to is the trace of CS in the nervous system. To know whether or not conditioning has occured no seperate trial is needed as CS precedes US.



of these three conditioning processing delayed conditioning happens to be more effective for establishing the de condition response this is because 'CS' often plays an important role in predicting the forthcoming presentation of 'US'

Conditioning also depends upon CS-US interval. If the time interval between the two stimuli is extremely short, conditioning becomes difficult. Likewise, longer interval also makes it difficult for the animal to recognise 'CS' as the signal for some future event. the optimal time interval is somewhere between 0.2 to 2 seconds

Backward conditioning :



Backward conditioning serves as a check against conditioning artifacts ? (artifacts = Experimenters creation, could be an extraneous variable)

what { do you respond to CS
do you respond to the context of CS.

It could be to CS
Could be to context of the test
could be to context + CS both

motivation is the factor → drive should be there

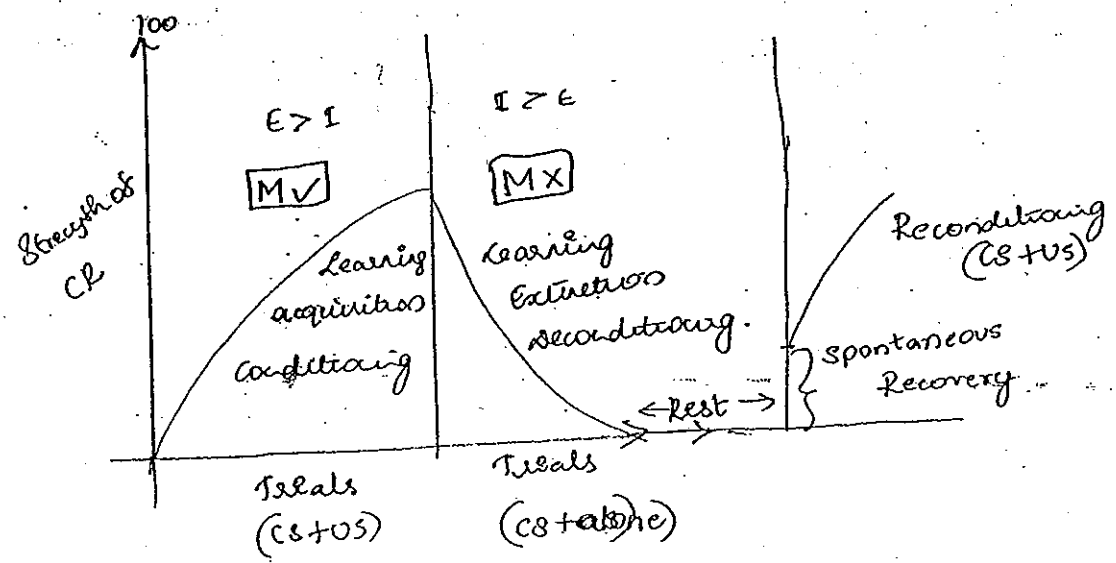
Is a type of conditioning procedure in which the presentation of US precedes but does not overlap with the presentation of CS.

There is little evidence if any that backward conditioning produces excitatory conditioned responses. This is not surprising as the associative processes ought to work-forward in time. As a matter of fact backward conditioning came to be used on occasions as a control for conditioning artifacts that may be due to the peculiar properties of 'CS' or 'US' alone. In other words backward conditioning was actually taken as a case in which associations would not form and it helped us check the effectiveness of other conditioning procedures.

Intensity, In general, conditioning is facilitated when the intensity of CS increases, It must however be mentioned that more than absolute intensity it is the intensity of the stimulus relative to the background stimuli that continues to have significance in the process of conditioning.

Familiarity. In contrast to the lab where stimuli selected for study are often novel, many of the potential conditioning stimuli found in our environment are familiar to us thru our day to day experiences often teach us that certain stimuli such as the background noise usually present in the office setting or the odours present in our homes do not predict anything usual In other words we have learnt that these stimuli are largely irrelevant which makes conditioning to them difficult.

LAW OF EXTINCTION



Extinction is the process through which CS gradually looses its ability to elicit 'CR' when CS is no longer followed by 'US' in otherwords CS when presented alone over a number of trials gradually loses its reinforcing property that is its ability to elicit 'CR'. Following extinction if after some rest interval CS is presented again, 'CR' appears this is called as ~~Spontaneous Recovery. Or Spontaneous recovery to occur it is essential,~~

1. Extinction has occured due to the withdrawal of the reinforcement of the unconditional stimulus
2. Rest has been provided to the animal following extinction
3. Following the rest CS is presented again
4. CR produced will be stronger than the CR given in the last few extinction trials.

Reconditioning :

Reconditioning is the rapid recovery of 'CR' following the CS-US pairing in otherwords when training is resumed again involving CS-US presentation the animal is able to acquire the earlier learned response in fewer no. of (~~times~~) trials. That the response stands acquired in fewer no. of trials as compared to the Original trials suggest that extinction merely leads to response inhibition and not the elimination of the response from the animal's behaviour pattern.

LAW OF DISCRIMINATION

Discrimination is the ability of organism to give one type of response to one stimulus and another response & a diffent response to another stimulus.

In other words animal makes diffent responses to diffent stimuli

Bell (80) + Food → Salivation

Bell (70) + Shock → Running

Bell (80) → Salivation
CS_1 CR_2

Bell (70) → CR
CS_2 Running.

Pavlov through his experiment demonstrated that discriminant failure does produce experimental neurosis in the dogs that he has studied, otherwise docile animal became Hostile and only after prolonged rest animal could regain balance and regained fitness for retraining.

Experiment with circle & ellipse ○ ⬭ cause Expth Neurosis.

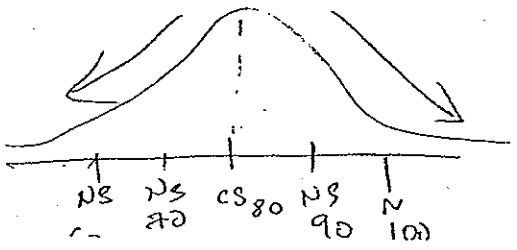
LAW OF GENERALIZATION.

It is the tendency of the organism to give conditioned response to a stimulus that resembles conditioned stimulus but has never been paired with 'US' in other words, CR is produced by the stimuli other than the 'CS', the greater is the resemblence of the other stimuli with 'CS' the stronger is the generalization.

CS (70 Bell) → Salivation

Neutral stimuli Bell (80) → Salivation
" Bell (60) → Salivation
" Bell (40) → Salivation
" Bell (50) — Salivation

} Salivation to stimuli similar to 'CS'

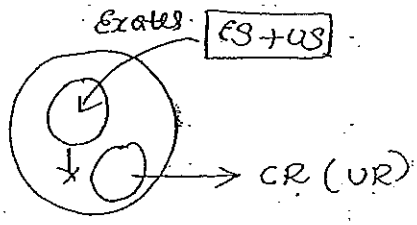


Theoretical Explanation: There are two theories

Stimulus substitution theory:

CR is the UR elicited by CS

Suppose,
Two regions in brain
One excited by CS
One excited by US



due to continuous pairing of CS+US and CS+ presentation.

the area which is excited by CS eventually becomes potential enough to excite another area automatically without US.

CR is the UR elicited by CS.

Region from where response emerged is the same but the stimulus is different [Dog salivates to bell alone]

In that case, CS & US must be comparable & equal
But they are not equal – biologically inappropriate to unusual also.

---

aversive stimulus ⟶ avoidance say.
Rewarding stimulus ⟶ Respond (salivation).

classical aversive conditioning
classical rewarding conditioning.

Next Class: Is discriminant training a Part of conditioning? ?
(not necessarily.)

Discrimination is the fundamental process that should be mastered for any learning to take place.

In daily life also,
discrimination is very important

But when we speak of classical conditioning, discrimination may not take place easily, initially.

Only when animal is forced to choose this is what brings reward, that brings punishment.

Eg: say classical cond^n

Like a student who writes everything that is thought taught in the class but not what the question demanded – it occurs. ↑ Poor Discrimination

Stimulus substitution theory :

The theory is based on the idea that CS as a result of pairing with US acquires the capacity to substitute the US in eliciting the response. In other words an association is formed between CS & US so that CS becomes equivalent of US in producing the response.

Pavlov thought that this association took place in the brain ~~Pavlov thought that this association took place in the brain~~, ~~one for~~ ~~it postulated the existence of two areas in the brain~~ 'CS' and other for 'US'. When food is presented it activates the 'US' area and 'UR' is elicited. When bell and food are consistently paired over a number of trials 'CS' area gets the ability to excite the area associated with 'US' and the result is 'CR'. CR therefore is 'UR' elicited by 'CS'

If stimulus substitution theory to be accepted then CR & UR should be identical & should be nearly identical because there has been no change in the response, the change has been in the stimulus that elicits it.

Empirical evidence suggests that 'CS' & 'UR' differ not only in magnitude but sometimes in their very nature as well for instance when shock is used as 'US' and 'tone' as 'CS' the 'UR' 'to shock' is running & CR to tone is freezing.

Anything Any behaviour with a survival value comes to an individual by Birth

We are born selfish not selfless.

Anxious → Anxious behvr ↓ self preservation

I learn becoz I'm anxious not because I'm nervous

anxiety provoked behaviours ll not learning. anxiety only helps in maintaining the behaviour/learning.

Eg: Teachers & parents using fear appeal as basic a tool to discipline their children

(Human) Expectation theory : Conditioning Exercise involves cognitive mediation.

INFORMATION

Dult Gyan

Animal (subject) in the Expt tries, engage in Probability learning

Expectation change, behaviour changes

change the expectation, Behaviour changes.

Eg : Expt. done by Rosenthal et. all with school children

→ It explains conditioning by suggesting that CS becomes the signal for 'US'. According to this theory regular pairing of CS with US results in learner developing the expectation that US will follow 'CS' & ('CS' will be followed by 'US') and it is in the anticipation of 'US' that the animal responds. Thus we can say that an association is formed bet memory of 'CS' and 'US' and when the learner looks back and searches his memory he finds that CS was always followed by 'US' ∴ whenever CS is presented he expects the arrival of 'US' and CR is made in anticipation of US. Thus conditioned response are not automatically grouped in CS-US pairing rather they are the result of the behaviour engaged in by the learner in expectation of a future event and that is 'US'.

Explanation of Extinction & Spontaneous recovery by

1. Stimulus substitution Theory of
2. Information Expectation theory.

Extinction >>> Exhibition — Respond.

I >>> C — Avoidance/(no response) extinction.

I. Stimulus substitution theory.

When CS is presented alone for a no. of trials, it no longer serves as a signal that 'US' will follow thus it becomes a neutral stimulus as it was before the conditioning and little attention is paid to it. When the animal after a period of rest following extinction is presented with 'CS' again ~~the (expectation that)~~ excitatory tendencies get an upper hand over ~~inhibitory tendencies for a brief period of~~ time and therefore the animal responds once again. This response if not followed by 'US' would result in animal not responding and if this is done again and again there would come a time when there would be no spontaneous recovery.

II. Information Expectation theory:

According to this theory 'CS' serves as a signal that US will follow and therefore animal responds. When CS is presented alone for a number of trials it will cease to serve as a signal that indicated the arrival of 'US' and therefore the animal would stop responding.

Spontaneous recovery occurs because 'CS' when provided following the period of rest, again raises the expectation of the arrival of 'US' and if 'US' fails to arrive the spontaneous recovery made would soon be lost

Rest weakened the inhibitory forces in the animal.
↓
Spontaneous Recovery

Few Spontaneous Recovery might occur but after a period of time Spontaneous Recovery will be there ∵ 'CS' has now become a neutral Stimulus to the animal.

II Spontaneous recovery will always be weaker than I one.

Eventually no spontaneous recovery occurs a bound or time

According to T. E. Theory.

The expectancy that ——→ Respond.
food will be followed by bell.

Expectancy +ve —— actual responds
-ve (either neutral) —— No response.

Exception to classical conditioning :

1. Conditioned taste aversion :

Flavours ——→ Salivation
(food cues)

Nausea ——→ avoidance.

Flavours + Nausea ——→ UR (avoidance).
CS

Flavours ——→ CR (avoid).

Eg: It's a type of conditioning in which "US" usually are stimuli that associated with nausea & vomiting occur several hours after 'CS' that is the normal 'CS' and leads to strong CS-US association in a single trial conditioned taste aversions are key for their survival ∴ they exhibit repeated intake of dangerous & toxic substances in the actual natural environment.

Among the human beings food and beverage aversions are common. Such aversions are unusually strong and can occur despite the understanding that the food was not the actual reason for our illness. The way in which these powerful associations develop differs from most of the conventional, classical conditioning in several important respects,

1. CTA can be established with single CS-US pairing termed as one trial learning.

2. 'CTA' has been reported when CS was presented hours before the occurance of US...

3. These taste aversions are extremely resistance to extinction they may even last a lifetime.

~~Different species showed difference in~~ the rate at which they can acquire the conditioned response. It has been found that human beings develop conditioned fear responses to dangerous looking animals much faster than relatively better looking animals.

↓

It is easy to condition a child to fear for lizard Compared to Rabbit.

Gregareousness — Wanting to be a part of a group.
Orientation.

→ It has been found that the types of conditioning most readily accomplished by any species happens to be the one that facilitates its survival in its natural habitat.

Variants of classical conditioning:

1. Higher order conditioning.

'CS' after having acquired an ability to elicit 'CR' serves as 'US' for a new neutral stimulus

Bell (CS_1) + Food (US) → Salivation UR

Bell (CS_1) → Salivation (CR_1)

CS_2 (light) + CS_1 (Bell) → Salivation (CR_1)

CS_2 (light) → CR_2 (Salivation)

Runs only for a short period Mostly no conditioning is possible after 2nd order. max.

Mutt Gyan

Food Primary reinforcement

Bell Secondary " — " .

Pseudo conditioning

Once here the experimental conditions themselves become the 'CS' this type of conditioning usually occurs for the fear responses and in such ~~conditioning contrived stimuli~~ is important. It is called pseudo being the behaviour is not conditioned to 'CS' alone, rather the response is an artifact of the experimental situation.

animal was given was conditioned to, Experimental, expt environment & NOT Bell alone the whole paraphernalia.

meaning to say outside the lab dog wouldn't have salivated for Bell.

Application :

1. To bring about behaviour change this includes.
   1]. Learning more adaptive responses in place of maladaptive responses.
   2]. Strengthening already acquired adaptive responses
2. Attitude formation & change

Mark & Gyan

Classical conditioning → S-R Ψ
Operant " → R-S Ψ
] Explain?

In Both C.C & Skinnerian Conditioning its, S→R Ψ.

stimulus is must — in both [no response can ever be given without the presence of stimulus.

For a Radical Behaviourists — Stimulus — Environmental

Cognitivists — mentalistic concepts could also be a stimulus.

Finally the root of action/behaviour is in biology. [Survival value]

Continued in next page →

Instrumental & Operant Conditioning.

Operant conditioning is a procedure wherein the learner performs some action which brings about certain changes in his environment that influenced the likelihood of further occurance & non occurance of that particular behaviour.

~~In other words learner operates on the environment~~ to produce certain consequences which may ~~increase & decrease~~ the likelihood of the reoccurance of the response.

Rat — Food Pallets — Lever

Autobiography Of a pressed Rat — चूहे की आत्मकथा

Operate on the environment → +ve ly Reinforcing — Operate again
→ -ve ly Reinforcing — less likely to try again

Response —Got— Reinforcement —So→ Response again

Stimulus here,
- arousal in Rat - keep it hungry
- Lever — give it some direction.

So it is S — R despite being R — S.

Obtaining the reinforcement is in the hands of subject here unlike in classical conditioning its in the hands of experimenter.

Classical conditioning — Learner inactive.
Operant conditioning — Learner is active operates in his environment.

Classical cond? — domain is limited., mode of reflexes.

Instrumental
∴ Learners behaviour/actions are instrumental in determing whether the behvr will be repeated or not

In Operant conditioning, the operant response is brought under the stimulus control. Operant conditioning is based on Law of effect given by Thorndike which states,

"Behaviours that are rewarded are repeated & behaviours that are punished are avoided."

~~Although the term instrumental and operant conditioning are used interchangebly it must be admitted that instrumental~~ conditioning traditionally covers discreet trial situation in which the subject has to perform the act within the stimulated environment. Operant conditioning on the other hand covers free behaviour and as well as discreet trial behaviour and also includes the behaviour in which the learner responds in some way that brings about the changes in the environment. [team Operant conditioning is more wholistic]

The heart and soul of operant conditioning is the Concept of Reinforcement, which refers to any event or condition that is a consequence of a response and that increases the likelihood of the response being repeated.

Reinforcement is of two types,

1. Positive Reinforcement

Any event or condition that follows the response and increases the probability of response being repeated is positive reinforcement

Positive reinforcers include events and conditions which the animal desires and which adds pleasantness in the animals' environment.

What is pleasant for one may not be so for other person. It could be anything as simple as a smile, hug, verbal reinforcement & so on.

Eg: Giving a toffee to the kid for doing the homework.

Negetive Reinforcement

It refers to any aversive stimulus or event which when its termination is contingent on a response increases the likelihood of the response being repeated.

Eg: Regular exercise ↓ Sugar level (diabetes)

Over here, aversive element is already there, we are trying to bring it down

Both +ve & -ve reinforcements can further be divided into;

1. Primary Reinforcers
2. Secondary / conditioned Reinforcers.

Primary Reinforcers

They naturally increase the likelihood of the response, No previous training is required with them to produce the effect

Secondary / conditioned Reinforcers

They donot work naturally for them to produce an effect the learner must have some experience with them. They get their reinforcing properties because of the consistent pairing with primary reinforcers and they undergo extinction if presented alone without being occasionally paired with primary reinforcement.

Our life is primarily directed by Secondary Reinforcers.

PUNISHMENT

Is an aversive stimulus or event that follows the response and decreases the likelihood of the response being repeated

In order to be effective, punishment

1. Should immediately follow the response (undesired)
2. Should be strong
3. Shouldn't be administered in an arbitrary manner

[Relevant for what the punishment is?]

An Act of child ⇒ punish once, reward once] NOT GOOD.

4. The administration of punishment should be accompanied with positive reinforcement for desired behaviour.

Skinner's

Types of Punishment : +ve, -ve

ANHEDONIA: Reinforcement will work only with these people.

Omission of Reinforcement - +ve reinforcement is withdrawn following the display of undesirable behaviour with the intention to decrease the likelihood of the undesirable response.

specific behaviour will only be reinforced.

arrival of reinforcement ↑ probability of occurance of behaviour.

Punishment should be followed by Reasoning. ∵ eg child will not know what the punishment was for.

Punishment should be accompanied by reinforcement for the desired behaviour.

it is not always recommended because it is basically an act of aggression - sense of revenge emerges in the individual who was punished.

Most parents go for punishment, while its the easiest thing to do, but punishment will always have a negative effect on the children especially when no reasoning is given for punishment.

creates lots of unresolved conflicts / negative (punishment) memories in his experience (memory).

Punishment is not the primary way out for disciplining a child it should always be the last resort

child doesnot really learn the right behaviour he/she will only learn to manipulate the situation control it.

Skinner's Experiment

Concrete reinforcers externally administered ↓ Self-administered Symbolic Reinforcers

Skinner developed the equipment called as the 'skinner's box' to study reinforced responding without breaking the experiment ido discrete trials.

Skinners box consists of a box with a lever attached that when pressed releases the food pallet. Hungry rat was placed in the box and to begin with was administered some food pallates in order to get familiarised with the kind of incentive that was available in the new and unfamiliar environment offered by the box. After initial wandering rat accidently bumped on the lever pressed it and the food pallate got released, food pallets served as an incentive to bring the drive level down. and the rat started pressing the lever again & again in order to get more food pallates to address its hunger drive. and the manner learned the response of pressing.

The procedure of operant conditioning can be expidited through the mechanism of shaping. Shaping is based on the principle that little can eventually go a long way. the organism undergoing shaping recieves a reward for each small step towards the final goal rather than receiving a reward only for the final response. Shaping is therefore a technique in which closer and closer approximation of the desired behaviour is required for the delivery of the reinforcements. Shaping involves two components,

1. Differential Reinforcement
2. Successive Approximation.

The subject is made to reach the desired behaviour by reinforcing the steps leading to it.

Chaining

Refers to linking together the sequences of behaviour the initial response in the chain provides the set of cues which become associated with & thus elicit the next succeeding response - and soforth and this manner the full sequence is chained of . chaining therefore can enable the Organism to link various responses and ultimately acquire a set of complex responses. In chaining one response can bring the Organism with the stimulus that can act as a discriminative stimulus for another response which in turn causes the organism to experience another stimulus that can cause the third response In this way the process continues.

The shaping and chaining enable the Organism to acquire a set of complex responses.

Schedules of Reinforcement

They are the contingencies designed to couple behaviour and reinforcement . they are the rules determining when & how reinforcement will be delivered. there are two types of schedule,

1. Simple schedules
2. Compound schedules

1. Simple schedules are those in which a single type of reinforcement contingency maintained within constant parameters is enforced throughout the experimental session . they can further be divided into,

1. Continuous Reinforcement schedules
2. Partial & Intermittent Reinforcement schedule

Continuous R. schedule :

A schedule of Reinforcement in which every occurance of a particular behaviour (desired behaviour) is reinforced.

In other words every correct response during acquisition is rewarded. Humphrey startled (surprised) the scientific community by showing that the extinction process was more rapid following 100% reinforcement during acquisition, in comparison to a schedule in which organisms received reinforcement intermittently & partially. In other words if the organisms ~~receive the reward each time it makes an appropriate response~~ during the period of learning and is then placed on an extinction schedule the organism is bound to lose the learned response faster than the organisms that had only certain percentage of correct responses rewarded. In other words partial reinforcement leads to greater resistance to extinction than 100% reinforcement and this is called as "Partial reinforcement effect"

Partial Reinforcement

Is one where in only some of the correct responses are rewarded. Before the animal is switched to partial reinforcement schedule, animal for sometime is trained on a continuous reinforcement schedule. Partial reinforcement schedule is of two types;

1. Interval schedules
2. Ratio schedule.

Interval schedule:

Interval schedule is set up in the terms of time elapsed from the delivery of last reinforcement

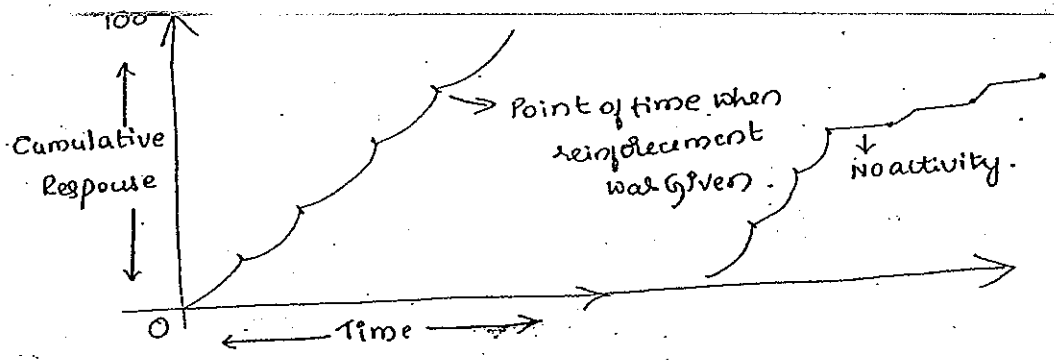
Ratio schedules.

Reinforcement is contingent on number of responses emitted by the subject as measured from last reinforced response.

Interval schedule is of two types,

1. Fixed Interval
2. Variable Interval

A schedule of reinforcement in which specific interval of time must elapse before the response will yield reinforcement.



Animal (rat) understands - this is like, there is a period of time immediately after the reinforcement, no activity happens (Animal rests) represented by —— in the graph.

Fixed interval creates such periods of lethargy (No activity)

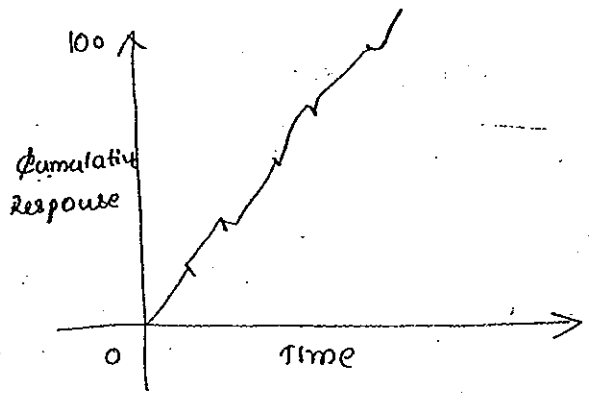
→ Reinforcement follows the first response emitted after a fixed time period as measured from the last reinforcement. At the beginning of the time interval the animal responds slowly & might even not respond at all, but the animal gradually picks up the speed of responding apparently anticipating the movement of reward. This kind of responding produces a pattern called as fixed interval scallop. The behaviour of the animal is somewhat similar to the way a person behaves as the deadline approaches. After putting off a certain task for as long as possible as the due date approaches the activity level also increases.

Variable Interval

Reinforcement occurs after a specified time interval that varies from one reinforcement to another. In variable interval schedule, the animal is rewarded for the responses made at the end of time interval of variable durations. This schedule produces high and steady steady rate of responding

Ratio Schedules

1. Fixed Ratio Schedule.



Reinforcement occurs only after a fixed no of responses have been emitted. Fixed ratio schedule generates a rapid bursts of activity to reach the desired target by accomplishing the ratio it usually generates a steplike cumulative recording indicating that the animal temporarily stops after the rewarded response but sometime later resumes responding at a rapid rate

In both fixed ratio and fixed interval schedules the rewarded response is followed by a "depression' in the rate of responding. and this is called as "post-reinforcement pause". We donot exactly know the reason for these pauses but considerable speculation is that perhaps, animals learn that the responses immediately following the rewarded response are seldom rewarded

The scallop exat is formed in the case of fixed interval schedule is missing in the case of Fixed Ratio schedule but the recent evidence suggests that overtraining the animal on fixed interval schedule gradually removes the scalloping

effect and the scallop gets replaced by 'break & Run behaviour' which is the characteristics of 'FRS'

Variable Ratio Schedule (VRS)

- It is a schedule of Reinforcement in which the Reinforcement is delievered after a variable number of correct responses. ~~first reinforcement comes only after a fixed number~~ of responses have been given that happened to vary from trial to trial. As VRSchedule produces high & steady rate of responding and produces maximum resistance to extinction.

COMPOUND SCHEDULE.

They emerge when two or more simple schedules are combined, they may be sequential or simultaneous. In the sequential compound schedule a single schedule (simple) is in operation at one time and in simultaneous compound schedule two or more simple schedules are operating together. These schedules might operate independtly or might be interdependent. Compound schedules are complex & because they have the potential to confuse the animal. They are less popular than simple schedules.

How S-R conditioning is different from S-S conditioning.

SR different from R-S. SR- R-S ✓

S-R learning differnt from S-S learning.

S-R conditoning involves no cognitive involvement where as in S-S learning there is involvment of cognition (cognitive learning)

(S — Sc) → classical conditioning.

S-R learning < CC
S-R conditioning < IC

Basically in S-S R is implicit.

Mott Gyan

TYPES OF INSTRUMENTAL CONDITIONING.

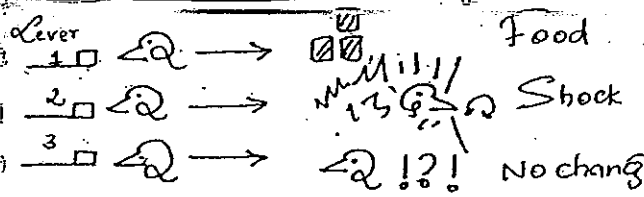
1. REWARD TRAINING (RD).

It involves no discrimination by the subject ∵ only one stimulus i.e one lever

Simple conditioning

Discriminant conditioning

Initial learning is always non discriminatory in nature its more conditioning.



Conditioning may / maynot involve discriminant (conditioning) training ?

then discrimination necessarily involve conditioing ?

⟶ No, Eg: cognitive learning.

Eg: Boy observes the father getting punished for jumping the signal, he learns it without conditioning.

In adults - cognitive learing is more important than concept formation through conditioning.

where as in children concept formation through discrimination offered by conditioning.

⟶

Reward training :

Discriminative cue is not available.

Response comes to be produced and reinforcement is based on reward

Discrimination Training :

Discriminative cue is available

the response comes to be produced and the reinforcement is based on reward

A discriminative cue is a stimulus of some sort that tells the organism when can reinforcement be obtained and when it cannot be obtained.

Generally the instrumental response will not be reinforced if it occurs when the discriminative cue is absent. In other words a discriminative cue, if it is used in an experiment it sets an appropriate occasion for the behaviour that leads to reinforcement.

Escape Training :

discriminative cue is not available, the response comes to be produced and the reinforcement is based on punishment (i.e withdrawal of aversive stimulus).

It might be reasonable to think of escape training as a special case of reward training on the assumption that escaping the (aversive) aversive stimulus like shock is rewarding. The important point is that the procedure of escape training is instrumental conditioning depends upon the reinforcement operation which involves an aversive stimulus like shock and the active response which gets the animal away from the shock i.e the punishing stimulus

Story of phobias [CC+OC]

Classical conditioning initiated it (Startled)
Operant conditioning maintained & consolidated the behaviour.

Eg : case of little Albert by watson

phobia becomes → phobic disorder

↑ Intensity of stimulus
↑ Temporal aspect (duration) of prevelance of stimulus.

Little albert
White Rat
+
Loud sound
↓
Fear

Later, Generalized to white coat, car, anything that is white.

Duff Gyan

Concept given by O. MOWRER

Two Factor theory. [CC+IC]

Avoidance learning → Phobic disorder
Gets generalised to

All phobias are the results of such avoidance learning.

Avoidance Training

discriminative cue is available, the response comes to be produced and the reinforcement is based on punishment. Animal is able to avoid the aversive stimulus by carrying out the necessary action during the warning time, to begin with animal shows escape learning and thereafter the animal picks ~~up the discriminative clue~~ and produces the desired response to avoid punishment.

Learning ≠ Training.

Learning under controlled conditioning is training

In a structured environment. [created & implimented by trainer]

training is a deliberate effort @ making the individual learn something as early as possible.

Dutt Gyan

Punishment Training:

Is reward conditioning a necessary/ precursor for punishment training?

essential.

YES.

you can lose only when we have !?!

had the rat been not reinforced before for pressing lever now all of a sudden, it won't press the lever.

'The idea that lever is dangerous, and should not be punished doesnot come to it from nowhere.'

(rat)

such exploratory conditioning is more of a cognitive learning than conditioning.

To stop exploratory drive of the rat, - it should have some experience, response for that earlier.

Punishment Training :

Discriminative cue not available, response comes to be withheld & reinforcement is based on punishment.

OMISSION TRAINING

Discriminative cue is not available, response comes to be withheld & reinforcemit is based on reward [withdrawl of reward]

~~Discriminated omission training~~

Discriminative cue is available, response comes to be withheld and reinforcement is based on reward [withdrawl of reward]

For Eg If we choose light as a discriminative cue we can arrange the cue so that its onset sets an occasion for omitting the lever pressed in order to obtain the reward. In the absence of the discriminative cue that is when the light is off we can introduce simple reward training where the lever presses would once again produce food pallates.

Discriminated Punishment training.

Discriminative cue is available, response comes to be withheld and the reinforcement is based on punishment. In this procedure when light is used as a discriminative cue its onset sets an occasion for avoiding punishment. and when the light is off pressing the lever will lead to reward in the form of food pallates.

EXTINCTION :

Need
Every learning involves some unlearning.

Extinction occurs when the responses that were earlier reinforced are no longer reinforced, in other words reinforcemet is withdrawn from the previously

Some like acquisition extinction is a gradual process

where the response tendency gradually declines as the number of non-reinforced trials increased, and finally the animal stops responding altogether.

If the animal after undergoing extinction is provided sufficient rest and even brought back to the experimental situation the animal begins to press the lever again but this response continues ~~only for a very brief period unless reinforced and this is~~ called as Spontaneous Recovery.

Generalization & Discrimination

Generalization refers to the process of applying instrumental responses learned in one situations to other similar situations.

The greater is the overlap bt the two situations the higher is the possibility of the instrumental response being given to the situation similar to one in which conditioning took place.

Discrimination refers to the organisms ability to understand whether or not the instrumental response is to be produced in the new situation that it has been placed. In other words the animal learns to differentiate bt the situations in which response to be produced and the situations where it is to be withheld.

Application of Ic/Oc.

1. Attitude formation & change
2. Behaviour formation & change / Behaviour establishment & modification.
3. Helping individuals replace their maladaptive behaviour with the more adaptive one.

Generalization.

It is the process of giving similar response to different or subtle different stimuli.

Types

1. Stimulus generalization
2. ~~Mediated generalization~~
3. Response generalization

Stimulus Generalization

CR is elliited by the stimuli other than the 'CS'

Eg:

Bell (60 decible) → Food → Salivation

Bell (70) (neutral) → Response (salivation)

The greater is the resemble of the other stimuli to the 'CS' the stronger it be the generalization.

Thus in stimulus generalization 'CR' is also generated by the stimuli other than 'CS' but which have never been paired with 'US'

Phonetic Vs Semantic Generalization.

Mediated Generalization

CS (style) — No response

US (Food) — UR (salivation)

style Homophones

style

CS (style) + US (food) → Salivation (CR)

Semantic Generalization

CS (style) — CR (salivation)

stile → 7 salivation (3 drops)

Fashion — 6 salivation (6 drops)

If animal is guided only by the physical properties of stimulus during generalization, there wouldnot be salivation for stile & Fashion

Its like, child is shown an apple, he sees another apple and recognises it — It is one.

child knows apple, sees a watermelon } Response "Edible" item

Brilliant response

Generalization is not the failure of discrimination

style, stile, Fashion — animal is not driven only by the physical properties, it sees a greatth association, similarity — higher level of understanding. (advanced cognition) semantic understanding like this (style & Fashion are more or less similar, connected) comes with the maturity of cognitive faculties.

Also indicates ↑ conceptual categorization.

→

In mediated generalization, the subject analyses the resemblance of the other stimuli with the 'CS' not on the basis of physical similarities (semantic similarity but on the basis of ^

and accordingly respond.

The semantic generalization therefore represents a case of mediated generalization.

Response Generalization :

CS — CR

(Bell - 70) salivation.

NS_1 60
NS_2 50 — CR
NS_3 40
NS_4 80

Stimulus Generalization

CS — CR (Flexing)

Bell (70) Right limb
Left limb.

Response Generalization.

A generalization procedure in which the paradigm of stimulus generalization is reversed and we enquire into the range of responses other than the conditioned response that are excited by the conditioned stimulus.

Factors influencing Stimulus Generalization

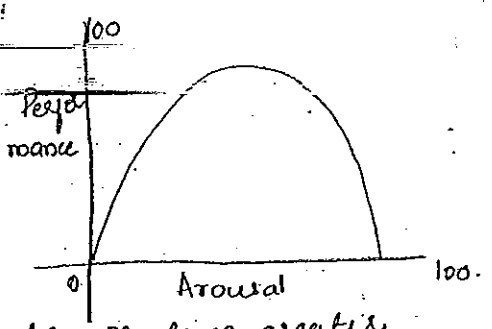
1. Drive level

↑ drive ↑ generalization

Say when you are hungry "everything looks like Roti" :D

Inverted 'U' relationship b/t performance & Arousal

YERKES — DODSON LAW



Higher the arousal ↑ generalization.

2. Schedules of Reinforcement

Partial reinforcement schedule produce greater generalization than continuous reinforcement (Inspite of discrimination Animal generalizes to anticipation of Reward.

3. Practice

More the practice ↑ generalization

∴ generalization is not the failure of discrimination.

4. Spaced learning

If practice trials are interspersed (seperated) with rest periods generalization is greater.

B. THEORIES OF GENERALIZATION.

- Failure of association Hypothesis by Lashley & Wade
- Failure of discrimination Hypothesis by Prokasy & Hall

Generalization is an active process.

Eg: Pavlov's dog when failed to discriminate, it had Expt. neurosis.

Use faulty generalization can happen.

Printed notes due for this topic ↑

Extinction

Is a process wherein the reinforcement is withdrawn following the occurance of the response that was reinforced in past. In other words responses that were earlier reinforced are no longer being reinforced.

Factors Influencing Extinction

1. No of Reinforcents

The greater is the No. of reinforcents given to the individual before extinction process is initiated, greater is the resistance to extinction.

2. Pattern of Reinforcent

Partial reinforcent schedules provide greater resistance to extinction than continious reinforcent schedules.

3. Delay in Providing Reinforcement

If there is some delay in providing reinforcement to the organism during the acquisition period, resistance to extinction would be greater.

4. Resistance to extinction is the decreasing function of the amount of effort the animal has to expend to produce responses during extinction.

Theories of Extinction

Response Inhibition theory

→ Hull (father of drive theory).

initially Pavlov spoke of this Hull developed it further.

Drive theorists basically talk of drive, as guided by organismic factors.

also known as Push theory of motivation.

Drive theory, Does it support the idea that drive reduction is the basis of behaviour?

Ritt Gyan

— Higher drive has no role to play here

drive reduction

~~Hunger drive comes to action only when~~ In fact the frustration & fatigue are reduced by the rest provided. [not responding]

a behaviour is acquired. (Learning /acquisition taking place)

Drive is the energiser of Behaviour

Drive ↓ reinforcement ↑ for the organism so organism tries to bring the drive level down.

Compulsion theory.

oo

Social LEARNING THEORY

Focuses on, Learning that occurs within a social context. It considers that people learn from one another including such concepts as observational learning, imitation & modeling. Albert Bandura is a leading proponent of this approach.

General Principles of Social Learning Theory

1. People can learn by observing the behaviour of others and the outcome of these behaviours.

2. Learning can occur without a change in behaviour. Unlike behaviourists who described learning as relatively permanent change in behaviour as a result of practice & experience, social learning theorists are of the opinion that people can learn through observation alone. Their learning may not necessarily be shown in their performance. Learning may & may not result in behaviour change.

3. Cognition plays an important role in learning. awareness and expectation of future reinforcement & punishment can have a major influence on behaviours exibited by people.

4. Attention is a critical factor in learning.

5. Social learning theory can be considered as a bridge & a transition between behaviouristic & cognitive approaches.

6. Person, environment & behaviour can have influence on one another.

7. Consequences produced by behaviour evolved by cognitive mediation and therefore reinforcement needs to be understood with respect to the understanding that animal carries for that reinforcement.

COGNITIVE APPROACH

Cognition is the process of knowing. It is the processing of information obtained through our senses. Cognitive processes involve,

1. Selection of information
2. Making attention to selected information
3. Association of the ~~two~~ pieces of information with each other
4. Elaboration of information in thought.
5. Storage of information in memory.
6. Retrieval of the stored information when needed

Cognitive learning refers to the change in the way in which information is processed as a result of the experiences person has had or is having. Because of these experiences the learner is able to added new meaning and significance to the event. The cognitive approach focuses upon the internal mental processes and to a cognitive Gestalt behaviour is not just something that can be represented only on the basis of overt properties. In fact it requires an explanation at the level of mental representation.

Cognitive Psychology is not anti-behaviouristic rather it strives to provide completeness to behaviourism which failed to explain many human behaviours like love courage, altruism etc. the two important forces that have contributed to the growth of cognitive movement are,

1. Gestalt approach
2. Neo behaviourism.

Compare & contrast :

Cognitive Approach

Focuses on the process of knowing rather than merely responding to the stimuli in the environment. To a Cognitive psychologist the important factors are the mental processes and not S–R connections.

Cognitive psychologists lays emphasis on the study of 'mind' & not on the study of behaviour. They are interested in how mind structures & organises experiences this is in opposition to behaviourists who insist that mind doesnot possess inherent organisational capabilities.

See human beings as active creatures who construct & reconstruct the inputs that they receive from their environment.

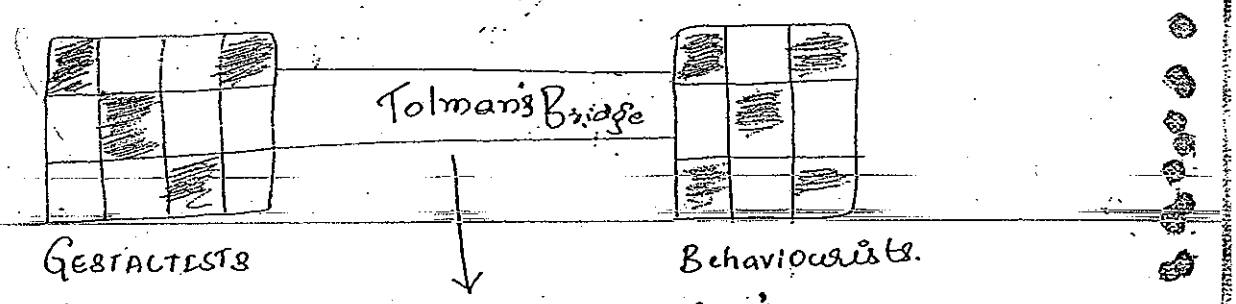
They see human beings as capable of participating in acquisition & application of knowledge deliberately attuning to some events and choosing to commit them to their memory.

Behaviouristic

Behaviourists see human beings as passive creatures who react to environmental processes.

S-R connections are what is importance is given to.

SIGN - GESTALT MEMORY OF LEANRNING
THEORY OF PURPOSIVE BEHAVIORISM OR ③ Tolman
COGNITIVE THEORY OF LEARNING.



Gestaltist Becoz
- Rejected the P of 'Trotchism'
- Accepted Molar Approach
- Regarded behaviour as purposive

Behaviorist Becoz
- He favoured animal study (experimental methods)
- Rejected P of pure phenomenology
- Favoured the idea of arriving @ Laws of Behaviour

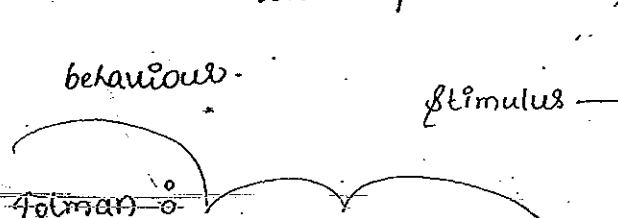
CONCEPTS OF Tolman

1. Purposive Behaviourism
   Organisms produce behaviour for some adaptive purpose.
2. Introduced the idea of 'Cognitive Maps'
   Cognitive maps are, nothing but perceptual representation of environment around.
   He said these are built up of Sign-Gestalten.
   By Gestalten, he meant
   every behaviour should be understood/viewed as 'whole' not as an entirely independent act.
   'Sign' — holistic understanding.

Sign gestalting are Cognitive Processes that are the learned relationships between environmental 'cues' and individuals expectation.

eg: 'Owl' in Indian context & in UK context are different.

↳ Intervening Variables
which operate b/t stimulus & response to influence the behaviour.



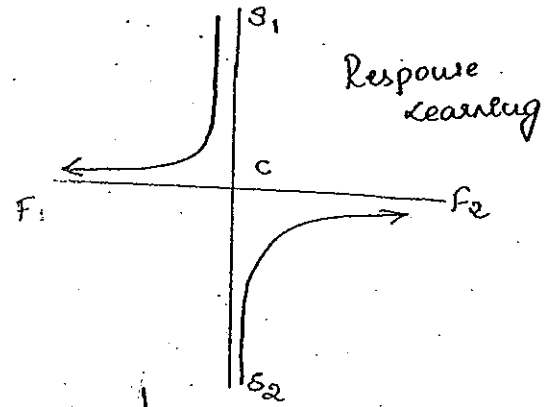
Tolman

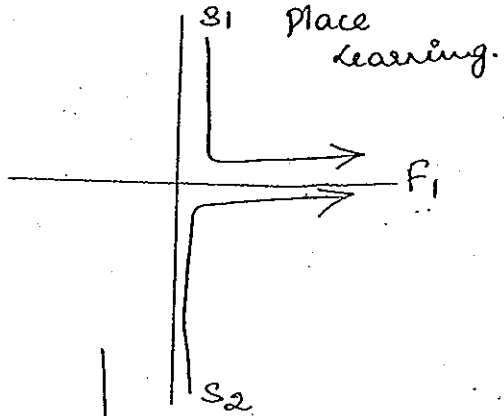
Life is all about knowing are 'Lay of Land' discovering what leads to what

the possibility that 'S' leads to 'B' is what motivates (outcome) the organism.

EXPERIMENTS DONE BY Tolman.

1. Place Learning Expt :.





Rat,

Should master Motor Response
'Knowledge of turning Right'
(motor response)

Performed ↓

Should master Cognitive maps.

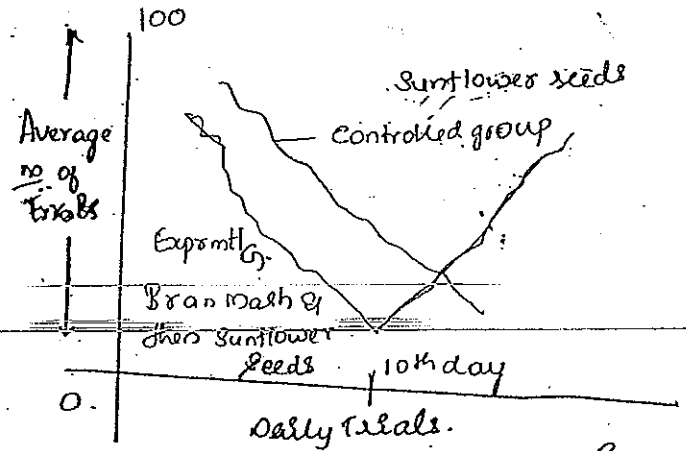
Performed ↑ Better

Response learning < Place learning.

Motor Response < Cognitive maps.

↓ (Performance) ↑

II. Reward Expectancy

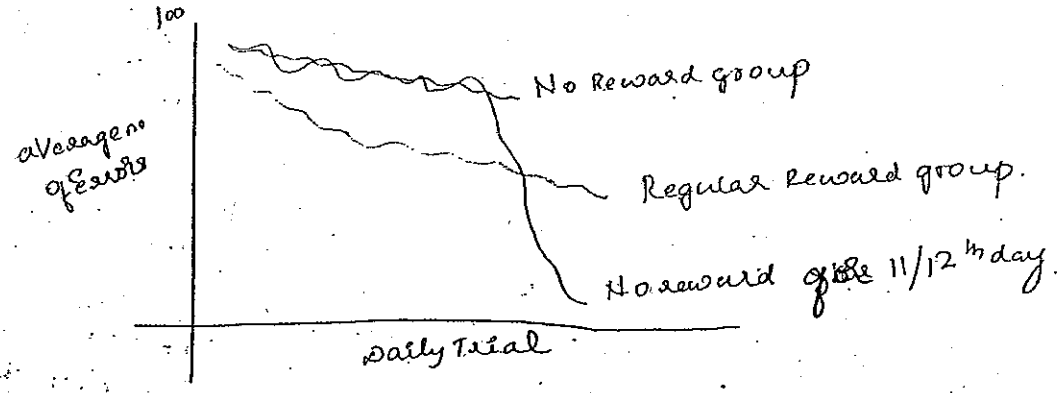


Importance of Expectancy.

Completely against Skinner's explanation suggesting the importance of Expectations.

Latent Learning.

The learning that goes unobserved and is demonstrated only when the conditions are right.



Sudden drop in the no of Errors occured here before, learning was going unobserved, was exhibited only when conditions were right - (reward is available).

— animal is likely to learn even if the reward is not available.

What makes it possible? — cognitive learning.

It was not an incremental process.

SIX TYPES OF LEARNING :

1. Cathexes

It is the tendency of an animal to seek certain goals than certain others when experiencing the drive.
Precisely-learning @ conditioning word that he is speaking about

2. Equivalance

~~They are similar to skinners conditioned reinforcers~~
They are not merely the belives that rewards and punishment will be found in certain situations but also the cognition that certain situations are equivalent to reward and hence by themselves rewarding and viceversa.

3. Field Expectancies

Are the cognitions about 'what leads to what ?'
They are made up of sign gestaltere and provide us with the layout of environment around us.

4. Field Cognition modes

Refers to the strategy & way of approaching the Problem solving situation. It is the tendency to arrange the perceptual field in certain configurations.
Tolman was of the opinion that these tendencies are innate. What could be modified with experience. The strategy that worked in one problem solving situation is tried in future in other problem solving situations as well
Thus Field cognition modes are problem solving strategies that transfer to the related problems
Our Field cognition modes are responsible for our biases & preferences for learning certain things faster & better than certain others.

5. Drive Discrimination :

According to Tolman Organisms can determine their

own drive state and respond appropriately. Unless the organism is not clear regarding its drive state, it will not be able to read its cognitive map. If the needs are not clear then the goals are not clear and the animals behaviour will be inappropriate. animals therefore learn to discriminate bit various types of arousal and what action would be appropriate for decreasing the ~~arousal~~ tension.

6. MOTOR PATTERNS.

motor learning was something that was not very close to tolmans heart however it is included in his six types of learning in order to give a comprehensive account of human learning.

motor learning involves trial & error learning and it is a gradual process of acquiring appropriate sensory motor responses to a given situation.

critical Evaluation:

If we consider the broad range of variables that tolman took into account we can conclude that he was perhaps one of the greatest learning theorists. Tolman discussed the kinds of laws & needs but he did not develop these laws. He did experiments that showed that cognitive formulations is better than the connectionist ones but he did not make these formulations precise enough to be really useful for prediction.

Tolman pointed the way towards the extention of cognitive study to include the best aspects of the connectionist approach but he did not carry his programme through. He is ∴ open to same criticism as other cognitive theorists are. and that is he did not

gave us the basis for objective prediction of behaviour.

DISCRIMINATIONAL LEARNING :

O.L → Continuity approach – Behaviourism
→ Non continuity approach – Cognitivism

~~Continuity approach~~

Talks of Habit strength which takes place in incremental fashion (gradual development of habit strength)

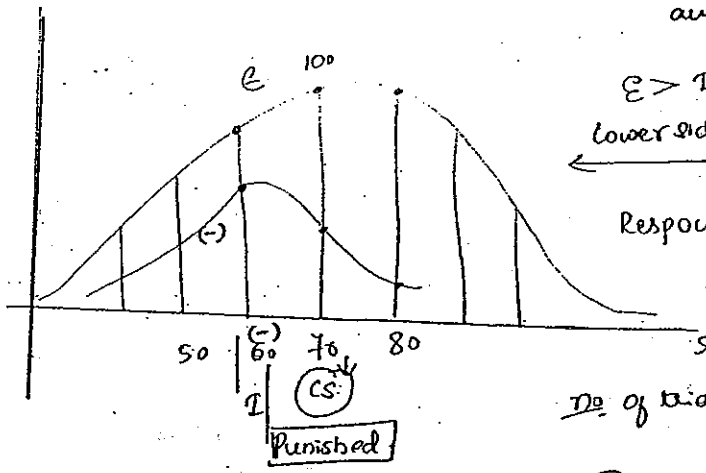
Non continuity

Hypothesis testing.

Focus is on 'Problem solving' process on all or none basis.

Continuity Theory :

net tendency ↑80 than 70.
where this is ↑ animal went for it.



Incremental in nature.

E > I
lower side ← 70 → higher side

Response ↓

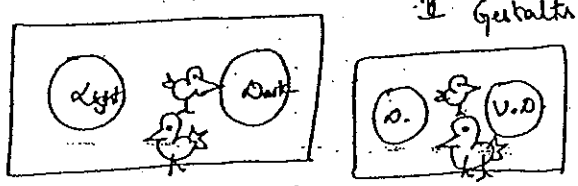
No of trials animal reinforced >

No of trials animal Punished.

Relational Learning (Gestaltists)

Absolute Learning (Tolman) S – R

→ Relational responding.
darker of the two.



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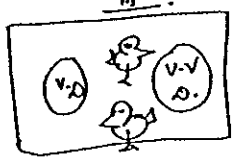


Gestaltist X

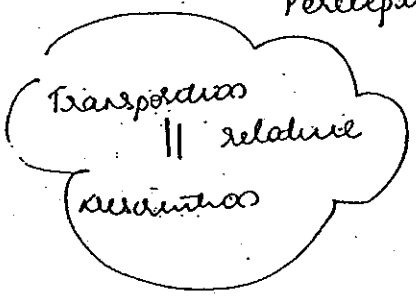
? Reversal.
As we go far from the CS
E ↓
→ Reversal of transposition.

Explain the importance of discrimination learning in Education?

Discrimination is the basis for generalization.
capability of discrimination is contingent on my capacity of Hypothesis testing [which is again dependent on ~~my capacity of concept formation~~, symbol manipulation]

↑ higher discrimination — ↑ generalisation ability
complex — Easy ↑

capacity of discrimination learning ∝ age of an individual. [cognitive faculty superior]
discrimination capability is also dependent on Perception.
Perception is nothing but sustained attention.



GESTACT APPROACH TO LEARNING

Whole or Configuration → Molar view wholistic
→ Sign
→ Figure & Ground theory

According to Gestaltism,
Learning is correct perception

MAX WERTHEIMER Father of Gestalt Ψ
(Ψ)

Organisation
Pregnancy

other significant contributors :

- Kohler
- Koffka
- Zeigarnik
- Lewin

Basic Principles

1. Phenomenological :
Phenomenological experience is different from the parts that make it up.
Accepts individual differences in the way how the individuals Organise things. [Glass – half full half empty]
2. Our Perceptual field is a composition of organised 'wholes' and this should be the basic subject matter of Psychology.
3. Whole is more than sum of its parts
4. Gestalt Ψ apply Field theory from Physics to the problems of Ψ. Field can be defined as a dynamic inter related system, any part of which influences every other part
5. Learning like memory & Perception follows the 'Law of 'Pragnanz'.
   - Learning & memory tend to be complete & meaningful even when original experience was not.
   - It was the result of Gestalt Ψ that the cognitive processes no longer remained a taboo(Vd)

Zeigarnik.

Zeigarnik effect : Incomplete tasks are better remembered than those tasks that have been completed.

Kohler : chimp 'sultan' – 'Insight learning'

Φ Phenomena

• Productive thinking (Ego Ego)

Zeigarnik

Cognitive connotation

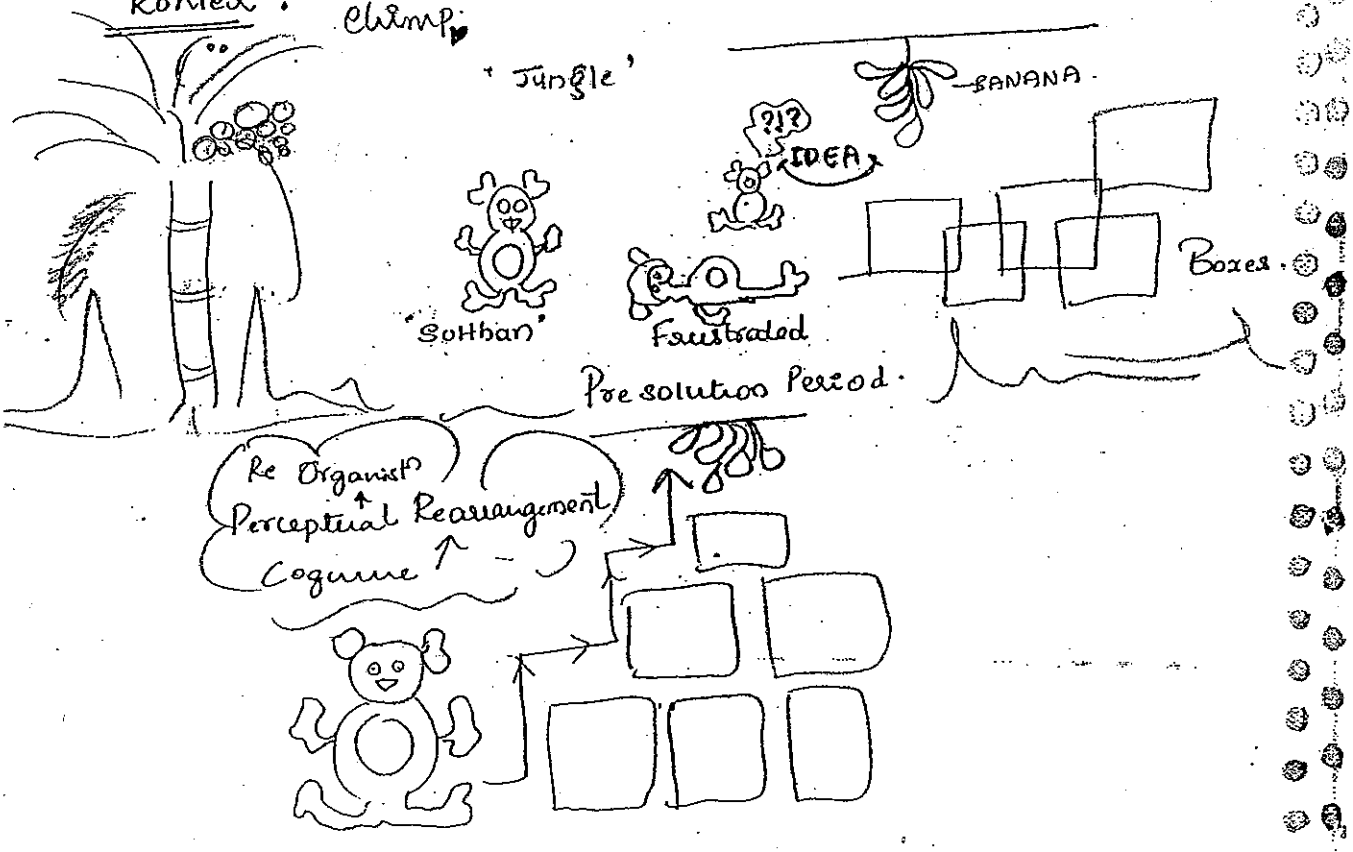
Incomplete tasks creates tension

↓ leads to

disequilibrium → So, strive to attain equilibrium. (Homeostasis)

Incompatable cognition ↓ cause tension

Kohler : Chimp



Later it was found that,

Chimp with the idea of 'boxes' did it (Insight learning) faster than those chimps which did not have the idea. ⟶ suggesting that Experience also plays an important Role.

For insight to occur,

- sufficient experience
- ~~cognitive~~ ~~factors~~ maturity.

⟶

Insightful learning is regarded as having four characteristics

1. The transition from pre-solution to solution is sudden & complete.
2. Performance based on the solution based on the insight is usually smooth & free of errors
3. Solution to a problem gained by insight is retained for a considerable length of time
4. A principle gained by insight is easily applied to other problems.

PRODUCTIVE THINKING :

~~Transposition~~

Social Cognitive Approach.

Albert Bandura.

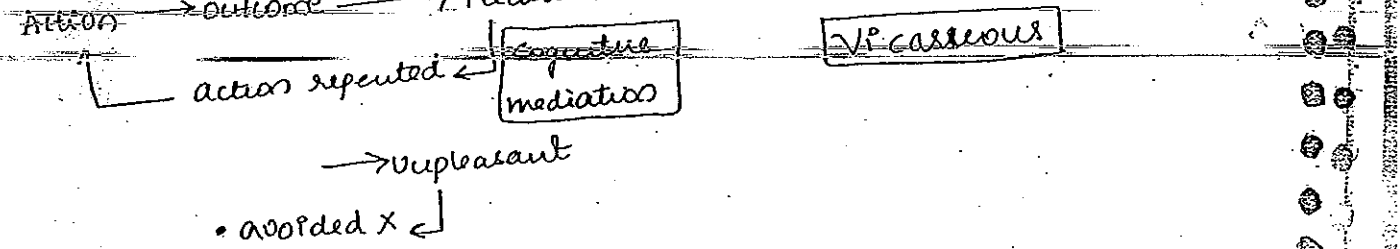
↓ Response Consequence

Idopt — I face the consequence

↓ Observational / (vicarious)

I observe others doing it

I learn



Direct

Bandura distinguishes between learning and Performance and believes People can learn without performing the behaviour. Responses need not occur inorder for learning to take place as we can learn through observation. Reinforcement facilitates learning, that is not an essential condition for it as we can learn by watching models being reinforced, Learning therefore has its origin either in direct reinforcement of responses or in vicarious experiences.

Learning can be considered to be the result of

1. Response consequences
2. modelling & observational Learning.

Response Consequences

Every response a person makes is followed by some consequence. some of these consequences produce satisfaction others dissatisfaction. and some others have a little effect as they are not cognitively attended to. Reinforcers can be either positive & negative but these effects donot follow automatically from the consequence of the response.

Complex human behaviours involve cognitive mediation of the individual inorder for the consequence of the

response to have an effect. Learning therefore occurs through response consequences but it involves the learner as an active individual who tries to make sense of the consequences of his action. It must also be stated that the meaning that the reciever (learner) arrives at may be quite different from that intended by the trainer (sender)

Bandura recognised three functions of response consequences

1. Impart information, we notice the effects of our actions and retain this information & use it as a guide for future actions

2. Motivate future behaviour. Response consequences motivate anticipatory behaviours. People are capable of symbolically representing future outcomes and carry out actions accordingly. They not only possess 'insight' but also 'foresight'

Eg:
We do not have to suffer from the discomfort of cold before deciding to wear a coat. The symbolic representation of (cold) discomfort) serves as stimulus for our thinking about wearing the coat and also increases the likelihood that we actually wear one. Receiving reinforcement as a result of wearing warm clothing becomes the motivator for the individual and the individual is inclined to perform the same action in future if the similar situation arises.

3. Regulate present behaviours, though this function has been formally documented by Skinner & other reinforcement theorists, Bandura however adds the cognitive dimension to it. Bandura maintains that learning occurs much more efficiently when the learner is cognitively involved in the learning situation & understands what he is doing and when his responses are successful.

MODELLING :

Human learning is not limited to response consequence alone, most of our learning is acquired through modelling that is by the observation of action of others. We observe 'others', we notice how new behaviours are performed and we retain this information for future use. Modelling is much more effecient than learning through conditioning as we are spared of countless response that might be followed by punishment or no reinforcement.

Observation learning / modelling accounts for how people learn some of the behaviours that contributes to their personality development. Observation learning occurs when an individual learn about the behaviour after being exposed to someone elses experience with that behaviour.

Bandura, who was the first psyst to ob. study observational learning asserts that,

"that" there are three effects of watching a model engaged in a behaviour,

1. It is possible to learn how to perform a new behaviour by watching someone else perform it.

2. The effect of observing the model is also that one can be reminded of the behaviour that one has not recently considered.

3. The observer can learn that the action has certain consequences.

Modelling is not simply mimicking or the imitation of the response observed. Unlike imitation & mimicking modelling involves addition and substraction from the observed behaviour and the generalization of the observed behaviour from one learning situation

to other, modelling therefore is more than simply matching our response with the observed response. It involves active thinking on the part of the observer so that the observed response can be customised & redesigned in accordance with the observer's needs.

~~Modelling can be influenced by:~~

1. Characteristics of the model
2. Characteristics of the observer
3. Consequences of modeling behaviour for the observer.

Characteristics of model

1. Status : Higher is the status of the model, ↑ the Probability that the observer will follow the model.
2. Credibility : ↑ the credibility of the model, more likely the behaviour of that model is followed.
   credibility ≈ Expertness, trustworthiness
3. Attractiveness :
4. Power :
5. Competance : & modelling.
6. Nurturance : Nurturance ↑ Effect (model) ↑.
7. Similarity : Includes 1. Physical similarity
   2. Attitudinal similarity.
8. Proximity (physical proximity) -

change agent should be from the same community.
Eg: Elution, caste system play a role.
Eduction of disadvantaged children

PROGRAMMED LEARNING

Skinnerian operant conditioning principles in learning
Particularly in instruction...

Individualization in education is the biggest challenge in

Teacher student ratio.

Development of P. learning

Individualized method of teaching is the need of hour
to address this need Programmed Learning Emerged.

Teacher centric —Shift→ Learner centric

Extrinsic ⟶ Intrinsic

concrete ⟶ abstract

Simple → Complex , known ⟶ unknown.

Programmed learning. [Behaviouristic]

Can take care of variety of needs of learner

- Is structured, [No deviation from the main course take place]
- allows Individual attention.
- Sequential operation., Molecular
- Focus is on product rather than on Process.

Self - instructional Learning :

Over here,

- Role of teacher is further ↓
- Learner is more independent.
- based on Cognitive & principles.
- Advanced than Programmed Learning method.
- Process centric, Learner centric.
- Precisely, an improvement over Programmed Learning.

Learner - Learning
Teacher - Instruction

- Molar approach

Programmed learning involves any machine & other device as a technical aid to learning. It has behaviouristic underpinnings with the principle of "Task analysis." in which the learning task is broken into small frames which are linked together. It relies on active answering and the learner works at his own pace.

Pioneer of programmed learning was ~~Sidney Pressey~~, but the technique was made popular by skinner.

Principles of P. Learning

Task analysis : It involves breaking down the task material into simpler units and understanding the basic steps that the learner needs to execute inorder to learn.

Small steps : The materials to be broken down into smaller units, this step shaping & chaining as the frames are carefully linked to each other.

Active Responding : The learner is made an active participant and is supplied the questions immediately after he has completed the learning required in the given step or frame. Learner therefore is kept busy.

Immediate feedback : Learner is provided information about his performance

Fixing principle. Once the feedback is provided the learner has the appraisal about what he has learnt The founders of this approach assumed that once the concept is clearly understood, it gets fixed in the memory of the student.

Self pacing : The learner operates at his own pace and therefore Programmed learning leads to individualisation of Education.

Programmed Learning Vs Programed Instructions

These two terms are used interchangebly but they don't have the same meaning. The term Programed Learning is concerned with the activities of the students, it is characterized in the terms of what the learners do with the teaching machine & the programmed material.

~~The learner works with the programme at his own~~ pace and learns through carefully ordered sequence of material which requires him to respond in some way or the other, the material is so designed that the student makes few errors and at every step the student is provided the feedback

Programed instruction concerns the teachers' or the programmers activity. It can be enumerated in the terms of what teachers do in preparing the programed material - The basic steps are,

1. The objectives of the programme are identified precisely and these are then written in behaviour terms.

2. The entering behaviours are specified in the terms of previous knowledge skill and abilities of the students who will use programmed material.

3. The programmed material & the content to be taught and the skills to be developed are thoroughly analysed.

4. Analysis of the content to determine

   ① Optemal instructional sequence
   ② Appropriate instruction strategy
   ③ Appropriate device of presentation

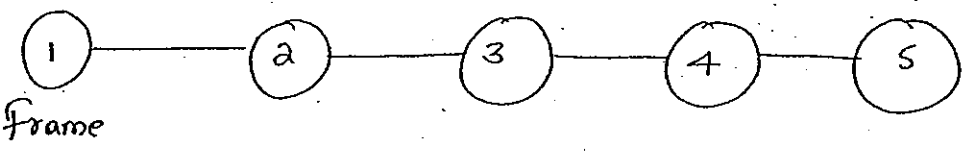
5. Programmed material is evaluated on the students for whom it is designed.

6. Programmed text is tried out, revised and validated on the basis of the empirical data of students' performance.

TYPES OF PROGRAMMING :

1. Linear [Skinner's work]

2. ~~Branched~~ No skipping of frames allowed. 00



eg: Fill in the blank

- Highly structured, non diagnostic
- Self Pacing [individual determine his own pace]
-

Linear Programing → Modified Programing.

Individual is allowed to skip a few frames if he knew it.

Crowder introduced another type of P. learning method called branching.

~~With the~~ As computers were invented, this method became even more advanced. CAT Computer adaptive testing.

Fill in the blanks were replaced by MCQ's which were diagnostic in nature.

Branched

→ Feedback elaborated, detailed

→ Less structured

→ Better.

Instructional design model :

Is a method of Padogogy ?? (method of teaching)

How do 'I' design the 'material' (method) effective.

Need analysis ⟶ Need fulfilment.

Target group

How is it done ?

Through the application of operators.

STEPS OF Creative Problem Solving is well.

- Do the need analysis of the 'learner' (Define the Problem).
- Design the method. (model)
- Implement & evaluate the model] using operators like instructional strategies
- Need fulfilled. ☺

Design is more than a process Infact it is the Process and resulting Product that represents the framework of thinking. Instructional design models all the guidelines & the set of strategies on which the approach to teaching by the instructors are based. Instructional design model tells us how to organise appropriate Padagogical scenarios to achieve instructional goals

One very popular instructional design model is

'ADDIE model'

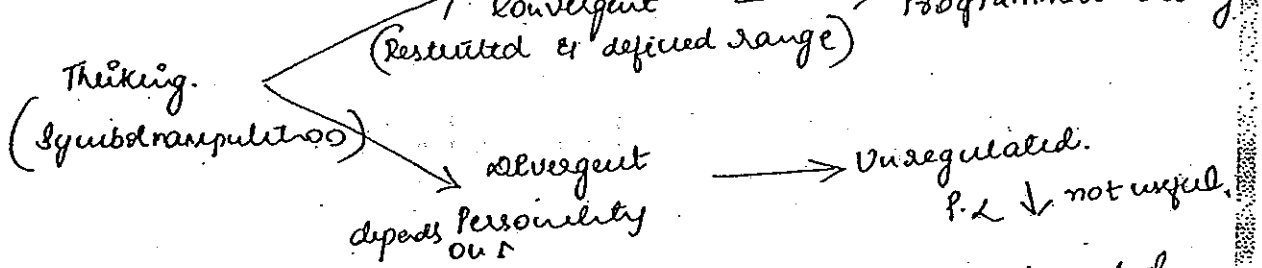
A - Analysis D - design D - development Implementation & Evaluation.

Application

In education of MR, mentally gifted, socially deviant, disadvantage group;

. Training of military personnel, training of teachers training of management trainees.

Recent Trends



With the advent of computers & the development of branched programing, the value of programmed learning has immensely increased. The interactive computer learning is a step beyond simple programme learning. The learner still works with discrete units still must respond and still gets immediate feedback, but the computer based feedback is much more detailed, individualized and diagnostic than that offered by the teaching machine. Computer assisted instruction as it is called provides one to one interaction, allows the students to progress at their own pace and is particularly useful in the subjects that require drill. The use of computers in programmed learning has allowed the teacher get more free time for more constructive activities, saves the student from embarrassment, caused by giving incorrect replies in public and has made learning interesting due to multi modal input.

A recent development has been the advent of Intelligent tutoring systems, these systems have four outstanding features,

1. Representation of Expert knowledge
2. The system keeps the complete record of learners progress and development.
3. The system has an instructional component that determines the tutorial strategy to be applied o
4. Interface which implies that interactive communication bit computer & the learner is possible

Self Instructional learning

It is a deliberate long term learning carried out by the learner more or less on his own it is a 'process' rather than the 'product' centred learning procedure derived from self instructional training developed by 'Donald Michenbaum'.

It is based on cognitive rather than behaviouristic principle, The learner is provided the opportunity to experiment and to discover and the learning model is not rigidly structured.

If the need be learner can call for expert advice.

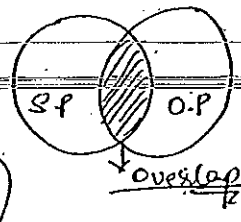
Probability Learning

Judgement
decision making
Reasoning
} involves Probability Learning.

Gambler's fallacy

Spoonerism.

Probability is not done blindly
It involves assessment & Evaluation



Faulty Probability
Eg - Gambling

Probability Learning refers to a type of learning wherein the subject uses his experiences with the event tries to arrive at as perfect match as possible between subjective & objective probabilities.

The term derives from "Truism" that most events in the world don't occur with complete certainity; but have probabilities associated with them.

Here Generally speaking Probability Learning is the apprehension of relative probability of occurance of several events facing an individual. Probability learning emerge from probabilistic functionalism of "Brunswik" which states that behaviour is best understood in the terms of the probable success in attaining the goal.

Brunswik Expt

He demonstrated that Rats learn to 'tune' their choice behaviour to the probability of likely placement of food in either of two directions using Image

Skinners Box Expt

Study the effect of Reinforcement without breaking it up into discrete trials as in the animal.

Maze :	Skinner Box
Everytime maze has to be set up.	No-breaks, No-jerks.
discrete trials	Continuous Process no discrete trial, continuous.

Using T-maze food was kept in 75% of the trials in the right hand segment and 25% of the trials in the left hand one. Towards the end of the experimental series Rats were found to turn 'Right' & 'Left' approximately in the same ratio that is 75:25.

It has been found that human performance in similar circumstances is not any different. The experiment of Bruniwik is said to be the forerunner of probability learning researches.

Probability learning studies involve action of experiments which typically have long series of discrete trial on which the participant is supposed to indicate which of the two 'cues' will be presented. 'Cues' are presented randomly with fixed probability. In Probability learning experiments Probability matching is said to occur when the probability with which the participant indicates that the 'cue' is occur matches the probability with which it does occur. Humphrey planned a probabilistic set up in which human subjects were engaged in predicting either of the two experimenter determined alternatives. In a study the subjects were required to guess whether a not the electric bulb would be lighted and subsequently either the bulb would & would not be lightened and the subjects predictions would be automatically confirmed & rejected. The study showed that the output & response probability matched with input & event

INFORMATION PROCESSING APPROACH (IPA)

What lead to the IPA ?

What is IPA ? Present status.

What lead to IPA :

- → decline of behaviourism → neo behaviourism.
- → Memory Research

~~Atkinson Shiffrin~~ model -

"Information Processing Fixed model"

- → Signal detection & cybernetics

[Science of communication & control]

What controls this, "Feedback".

- → Modern linguistics — work of 'Noam chomsky'
- → Theories of cog. Development — Piaget, Vygotsky.

IPA Computer	PDP [Connectionism]
Computer metaphor	Brain metaphor
Sequential info processing	Parallel distributed processing
Based on Computer science	Based on cognitive neuroscience
Focus on software (strategies)	focus is on Hardware synaptic connections.
central processor that directs the flow of information to one storage area to another	Pattern of activation account for various cognitive processes
Knowledge	Knowledge is not stored in various store houses but within the connection b/t units.
People perform astonishing cognitive feats by applying mental operations to symbols.	Cognition is the network of connection among simple processing units. Because these units are sometimes compared to neurons

EPA	PDP
Learning occurs when changes in information processing occur following the acquisition of new strategies through experience & Practice.	connectionist model is also called as neural network model. Learning occurs when new synaptic connections are established through experience.

Human Vs Animal Learning

Human beings have stronger tendency to learn as their learning behaviour is not only guided by biological but Psychological & social motives as well. Because of their capacity to use language human beings learn faster than animals & their learning is far more complex things than animals.

Verbalisation enables human beings to organize their environment in a better fashion than do animals

Because of their superior memory power human beings can more effectively use their Past experiences in solving their present problems. Their superior memory also allows them to zero upon the relevant cues faster

Because of their ability to do ideational thinking human beings can carry out trial & error learning at Imaginary level and can anticipate things & act accordingly.

Human beings can carry out observational learning while as animals at best can imitate

Human beings can do insightful thinking that is much superior than what animals are capable of.

Human beings are capable of combining their insight with foresight and use them to enhance their learning & growth.

Attitude, Values & Interest

- Communication
- Social integration
- Gender
- Terrorism
- ~~Sports Ψ~~
- Rehabilitation Ψ

- Characteristics of attitude 20/30.
- Comparison of attitude
- Functions of attitude & their role in Behaviour change (30)
- Attitude & Behaviour learning. 20/30
- Problems in Attitude. 20
- Thurstone scale Vs Likert scale
- Attitude Value Relationship.
- Theories of attitude change
- Eug. Festinger's cognitive dissonance theory 60
- Self Perception 20
- Balance theory 10
- Congruity theory 10.
- Attribution theory 30/60

Attitude formation 20/30.

→ Inculcation of values in children
→ value development in children through Education.
→ Characteristics of Values
→ Value, interest & Relationship.

* 10/20/30.

INTEREST

Newcomb, Learned enduring Predisposition to behave consistently either in favourable & unfavourable manner with respect to some object, person or a class of objects and persons

~~A neural and~~ mental state of readiness ~~organised through~~ experience, exercising directive & dynamic influence upon individuals response to all objects and situations with which it is related.

Krech & Crutch Field, defined attitude as a learned Enduring organisation of motivational, emotional, cognitive and perceptual process with respect to some aspects of the individual's world.

→

Prejudice = Pre-Judgement.

→ I hold an idea

→ gets supported in my group.

→ turns into an action (turns outwards)

(negatively disposed).

Intergroup orientation → about our group / by another group

Irrational belief

Rift Gyan

→

Characteristics of Attitude

(1). They are learnt & not innate, they are the products of our interaction with our environment

(2). They are enduring and therefore not subjected to change easily

(3). Though they are difficult to change however change can occur & right conditions for inducing the change are present & Created.

[By providing a democratic environment]

Let us focus on

Attitude formation than working on changing an attitude.

Prevention is better than cure.

It is difficult to change the attitude because, it is in the "self" it gives you an identity, it takes lots of effort for the formation of an attitude, can't be changed easily.

Extreme emotions can ~~eventually~~ be detrimental.

→

(4) Attitude involves individuals as well as groups.

(5) Attitudes involves subject object relationship.

(6) Attitudes have motivational & affective properties. They inspire action & have evaluative component in them

Values are vague
no clear subject object relationship like Attitude

Person has very vague notion of what values he has
But knows what attitudes he has.
∴ its diff to change attitude
than value

(7) Attitude predispose people to behave in certain ways and they (attitude) confirm to the principle of consistency.

(8). Expressions of attitudes happen to be intelligible that is when people express their attitude we get to know them we may not know why they feel so but we know what they feel

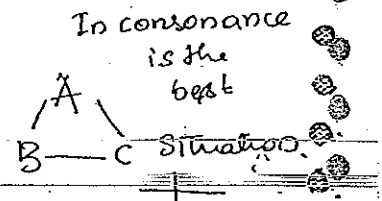
(9) Attitudes are communicated. Expression of attitude is not simply intelligible but is made so in order to be understood by others. in other words expression of attitude is a social act and presupposes an audience with whom this expression may be understood.

10. Attitudes are held because they serve some function for us.

@COMPONENTS OF ATTITUDE

- 3 components given by Katz et al

1. Cognitive component : (Belief)
2. ~~Affective component~~
3. Action tendency component : (B) behavioural.



Cognitive component

It refers to our beliefs regarding attitude objects

Eg : Mendel used Pea Plants

Affective component

It refers to the positive & negative feeling held by an individual & a group towards the attitude object. The affective component to some extent is based on the awarness we carry about the attitude objects and predisposes us to behave in a particular manner

This component is reflected in prejudice and is responsible for the evaluative and judgemental orientation that we carry in our assessment of attitude objects. It is measured by physiological indices. (↑ Heart beat enlarged pupil in the eye etc).

Action tendency

It refers to our behavioural readiness. It denotes, the behaviour we are likely to display with respect to attitude object, it is our readiness to respond to the attitude object in a specific manner.

1. Action tendency component culminates in action, subject to environmental variance, elaborate ???

2. Prejudice is the result of discrimination, or it is the results in discrimination? Both true ✓

Prejudice is nothing but negative, irrational, intergroup attitude. Prejudice will lead to the readiness to act against the outgroup in a variety of ways which will range from anticipation to discrimination to extermination.

Whenever action is done it will carry the seeds of dissonance in the individual.

Prejudice is an attitude
- If the environment is favourable then this will get an expression
- If the environment is unfavourable it is inhibited.

Discrimination	Prejudice
Discrimination is action	negative, irrational intergroup, attitude

Discrimination done → Guilt caused → (suppress) the guilt by developing Prejudice.

Past Experience → Attitudes Internal not directly observable → Behaviour covert responses

Stimulus Si + N External observable → Behaviour covert responses

Attitude as intervening variable between S & R

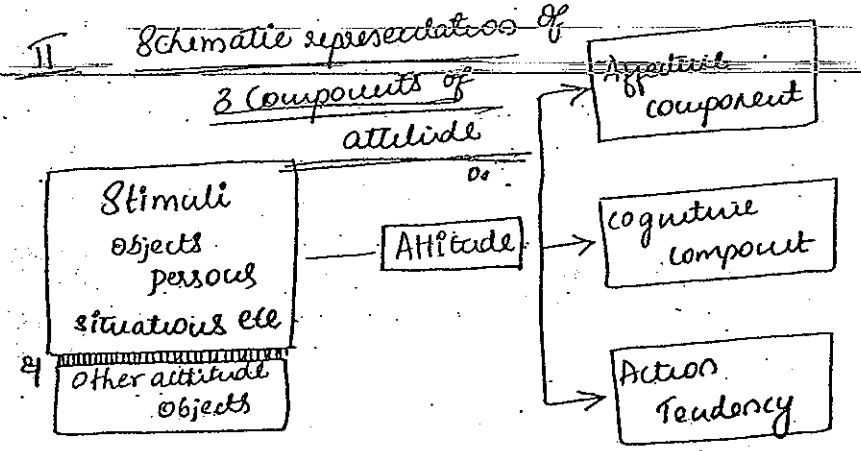
There will be some subjectivity when we try to measure attitude through Behaviours available

Because behaviour is partly determined by stimulus situation as well.

Keeping stimulus situation constant is not possible.

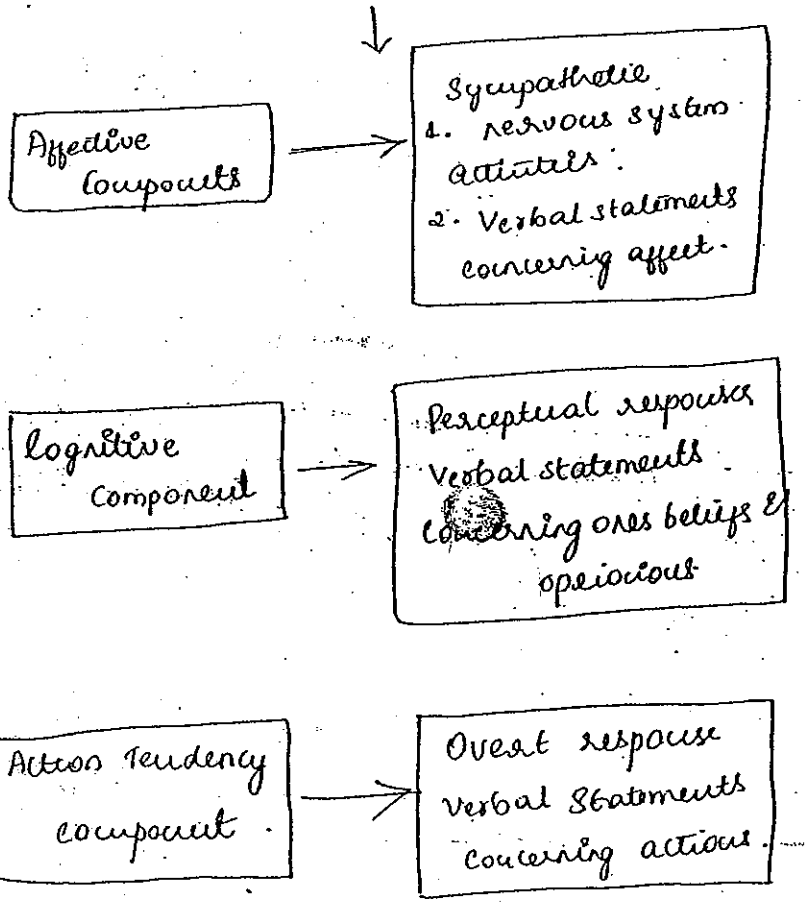
∴ All Psychological constructs are measured indirectly always for direct measurement is not possible.

II Schematic representation of 3 components of attitude



Affective comes before Cognitive Components

∵ → Evolution point of view
→ Energy conservation.



These three component of attitude also differs w.r.t.

1. valence (The degree)
2. Multiplexity. (variation in no. & kind, Intensity)

Valence refers to degree of positivity & negativity present in the individual with respect to attitude object. Multiplexity refers to the variance in the number & kind of the elements making up the attitude components

Valence with respect to cognitive component refers to the degree of positivity or negativity in the belief that the individual holds towards the attitude objects.
With Respect to attitude component valence refers to the intensity of emotions generated w.r.t attitude objects.
With respect to action tendency valence refers to the intensity of positive & negative action that an individual contemplates w.r.t attitude object.

(A) Unconditional Hate — Unconditional Love

(A-T) Unconditional Rejection — Unconditional acceptance

(B) Tendency to destroy — Tendency to support.

Extreme (positive) opinion — Extreme +ve opinion.

Multiplexity w.r.t component of attitudes,

Multiplexity refers to the no. & variety and therefore w.r.t belief component it includes the no. & the kind of belief that the individual holds towards an attitude object. Likewise w.r.t affective component it refers to the no. & the kind of emotions generated w.r.t attitude object.

W.R.T action tendency it refers to the variety and the kind of actions that are likely to be demonstrated towards the attitude objects.

The three components of attitude are so intimately fused that they make attitude a unitary variable

Relationship between cognitive & affective component of attitude & how they influence each other.

How cognitive component influences affective component.

1. The emotions that we experience are strongly determined by the interpretation we make of the cognitive 'label' we select. Our internal reactions don't give us much idea about our feelings and we often look outwards, i.e towards our behaviour & the external world for the cues about our feelings

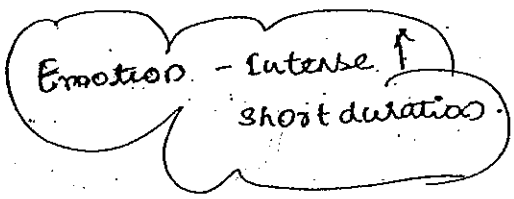
2. Our cognition can influence our emotions through the activation 'schemas' containing strong affective component

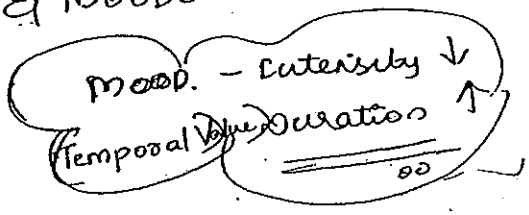
3. For example, if we label the individual as belonging to some group and the schema in our LTM suggests the traits the person is likely to possess. If schema is loaded with information that the person has negative traits then that schema is likely to exert a powerful influence on the feelings or the emotions that are likely to be generated in us for this individual.

3. Thoughts can influence our reaction to the emotion provoking events, anger for instance can be reduced by apologies and other information that helps us explain why others have treated us in a provocative manner. Cognition about the events other than which generate anger can help us to reduce & prevent anger.

4. Through expectancies cognition influence emotion, Our expectancy guides our judgement and our emotional reactions. Our expectancies to some extent can help us decide the type of feeling that we are likely to hold towards the attitude object. When individuals hold expectation about how could they will react to the new stimulus & an event, these expectations shape their perception of & feeling about the event when they encounter it.

INFLUENCE OF EMOTIONS & MOODS ON COGNITION.





Moods influence our judgement of people & social events positive mood increases our creativity because Happy mood activates wider range of ideas and association · and creativity involves combining these ideas into new patterns.

Experts are not very clear about the idea that whether the positive & negative effect produces a mirror image effect on our cognitions. while there is sufficient evidence to claim that good mood enhances creativity not enough evidence is available to suggest that negative mood produces an opposite effect.

Mood congruent Judgement effect :

States that there is often a good match between our moods and our thoughts. When we are feeling happy we tend to think happy thoughts and retrieve happy ideas and experiences from our memory. In negative mood we tend to think unhappy thoughts and retrieve -ve information from our memory.

Forgas, proposed "affect Infusion Model" to explain how affect influences our social thoughts and judgements the model postulates two mechanisms to explain this

1] Affect serves to prime (trigger) similar or related cognitive categories. When we are in a good mood the feeling serve to prime positive associations and memories and when we are in a negative mood they serve to prime negative associations and memories. Our mood influences the attention and encoding that we do the information that is congruent with our current mood is better attended to and encoded.

2. Moods can influence cognition by acting as a Heuristic cue that is a quick way of infering our reaction to a specific person or a stimulus. Adding to this mechanism which is also called as, "Affect as information mechanism" when asked to make judgement about something in the social world we examine our feeling and respond accordingly. If we are in good mood we conclude that we like the thing and vice versa. In other words we ask ourselves the question how do I feel about it and we use the current affective state to answer the question even when the state happens to be unrelated to the object or event.

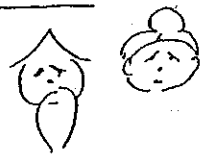
Why is a salesman smartly dressed
Positive emotions sparked
customers - impressed
goods sold

Anything induced through mood is short lived

According to Forgas, affective states influencing cognition through priming occur in a situation where we engage in substantive thought that is, we attempt to interpret new information and related to the existing knowledge.
In contrast affective states influencing cognition through the second mechanism i.e Affect as information mechanism occurs in a situation in which we think heuristically i.e the situation where we try to get away with as little cognitive effort as possible.

Attitude Behaviour Link

La piere (1934)



with a chinese couple travelled across US & stayed in 251 Hotels. out of which chinese couple were mistreated in one Hotel

why should be study attitude?

Attitude behaviour link is v. strong.
by studying an individuals' attitude, we can predict his behaviour. So Attitude is studied.

Later he wrote letters to different Hotels asking them if they were interested in providing accommodation to a chinese behaviour. Most of them replied saying "No"

this particular experiment by Lapiere depicted that there is discripency b/t attitude & behaviour.
[having an attitude, displaying that attitude through behaviour]

De Fleur & Westie,

250 white American students
subjects

ABA Anti Black attitude
measured through questionnaire.

Based on the results they were devided into two groups

1. ABA ↑
2. ABA ↓

[national, international]

What level of this photograph would you allow this photograph for a Anti segregation Campaign

Would u like yourself to be photographed with the black of opposite gender ?!?

then,
25% behaved in Attitude discrepant manner.

WICKER

Reviewed a large no. of studies & concluded that the relationship between attitude and behaviour is weak and attitudes are of not of much use in predicting the behaviour.

Fishbein

Concluded that there is no good reason to believe that an overall attitude towards an object will necessarily predict specific behaviour. this is because an attitude is an hypothetical concept abstracted from totality of persons beliefs, feelings and behavioural intentions regarding the object

thus any isolated behaviour may be unrelated & even negatively related to overall attitude. We will get success in predicting the behaviour by measuring the attitude only when we measure attitude about specific behaviour.

On the basis of above findings, four factors governing attitude-behaviour link have emerged:

1. Attitude Specificity: It says that the degree to which the focus of a given attitude is specific. Specific attitudes are much better predictors of behaviour than general attitudes.

2. Attitude Relevance The extent to which "Attitude object" has an effect on the life of the person holding the attitude influences the attitude behaviour link. The stronger is the effect, the greater is the individuals vested interest in the attitude object and the stronger is the attitude behaviour link.

3. Attitude Strength

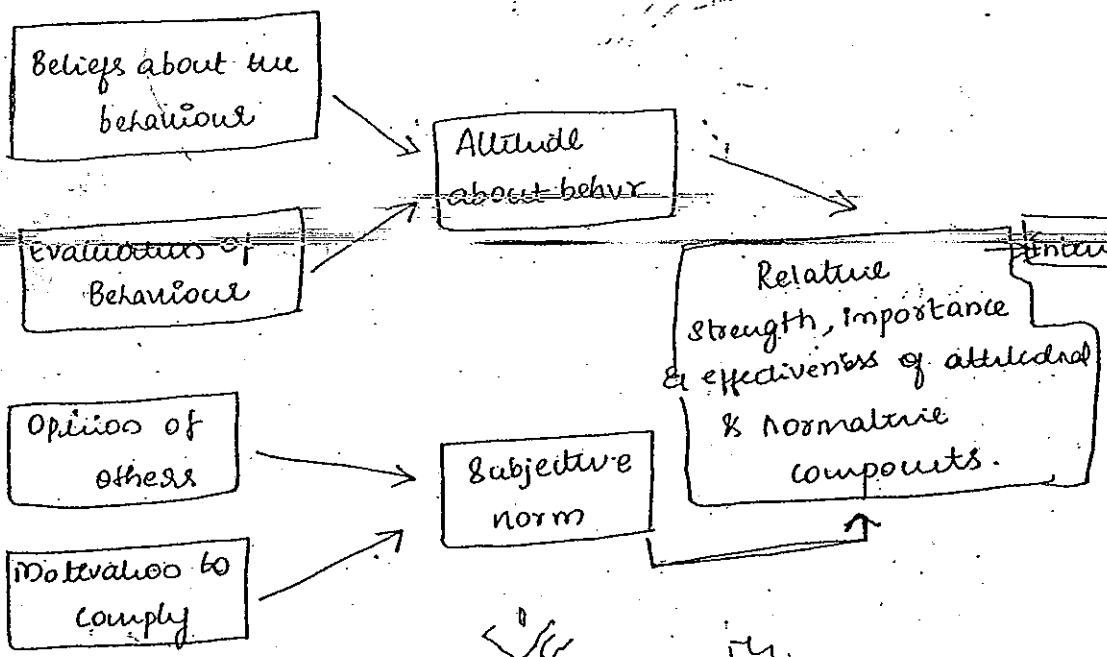
Intense and strong attitude are much better predictors of behaviour than weak ones. Attitudes formed through direct experience are stronger than those formed through indirect experience.

4. Attitude accessibility.

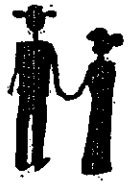
The ease with which specific attitudes can be brought into consciousness & awareness is called as attitude accessibility. The greater is the accessibility the stronger is the effect of various attitudes on behaviour.

Theory of Reasonal Action

Fishbein & Aizen,



Eg:



Couple in love want to marry.

Father with pugdit Beed against the marriage.

Theory of Reasoned Action :

According to this theory behaviour is determined by intention and intention is determined by weighted additive function of attitude towards behaviour and the subjective norms. Attitude towards behaviour is called as attitudinal component while the subjective norms are called as normative component. Attitude towards behaviour is defined in the form of evaluative beliefs about the consequences of performing the behaviour in question and the evaluative beliefs contain in them,

1. Expectancy element
2. value element.

Expectancy element involves individuals judgement whether the consequence is made more likely or less likely by his performance of that behaviour & value element is decided by how good & how bad such consequences would be.

Subjective norms are composed of qualitatively distinct beliefs about how specific individuals and groups views one's performance of the concerned behaviour and they also contain

1. Expectancy element, which is decided by finding out whether or not significant others would approve the individual if he performed the behaviour

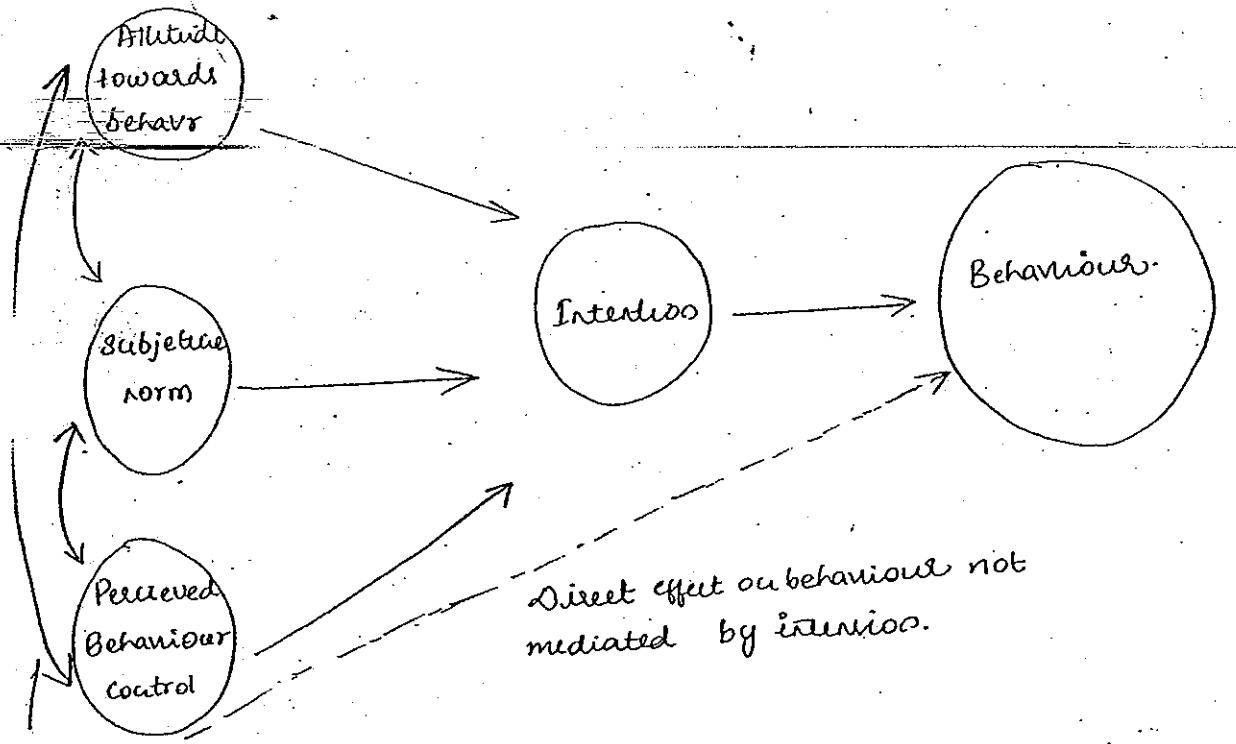
2. value component, which is referred to as the motivation to comply.

One of the ways in which the theory has proved to be more useful is that it has enabled us to know the importance of attitudinal & normative components and their relative contributions in predicting the behaviour.

Eg: familism in India

Theory of Planned Behaviourism

Ajzen / Aizen.



Perceived Behaviour,

→ Confidence of the Student in Examination Hall.

→ Seeing 'Q's' paper. There are people who are equally

explanation "I can write something – I can manage.

People take into account whether they are capable of performing a behaviour when they formulate their intentions. If the behaviour seems beyond their personal control then people simply do not intend to perform it.

The concept of behavioural control is very similar to the notion of self efficacy which refers to the extent to which individuals believe that they have skills & opportunities needed to perform necessary actions.

FUNCTIONS OF ATTITUDE

1. Understanding & knowledge function.

Our attitudes helps us understand the world around us and make sense of the ~~ourselves~~ around us, they provide consistency and clarity in our explanations and ~~interpretations~~. This function is also known as knowledge function of attitude but term doesnot imply that attitudes provide us a factually truthful picture of the world around us. they provide us with the picture that is meaningful & understandable to the individual who holds it.

2. Want Or Need Function

Many attitudes are formed as a result of our past reward & punishment for saying & doing things. [in a] once formed, these attitudes continue to be useful in helping us to satisfy our needs and reach our goals. these attitudes have also been termed as adjustive (in the sense) because they help us to adjust to life situations and utilitarian because they serve of use to the individual in reaching the goal.

3. Ego defensive function

Attitudes help us protect our self esteem from various 'hurtful' situations. All individuals use defense mechanisms to some extent but they are used more by the individuals who are insecure, who have deep internal conflicts and who feel inferior.

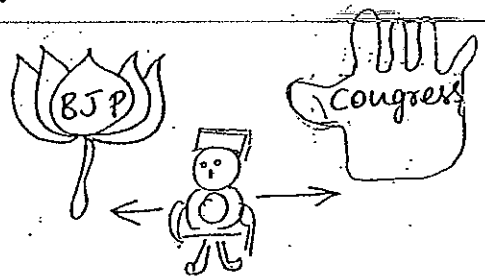
4. Value expressive function:

Attitudes help individuals establish their self identity and attitudes enable individuals to identify and know about themselves. not only individuals' self identity ... is shaped by attitude but impact of it is through

attitude that others come to understand what kind of person he is.

ATTITUDE CHANGE

It is the change in the degree and/or direction or both of the preexisting attitudes.



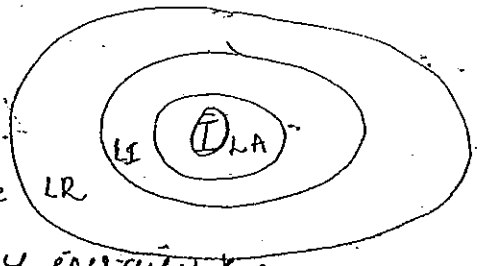
1. Attitude held
2. Function it performedes.

The knowledge of preexisting knowledge attitude in Attitude change.

—Attitude held (8)

1. The kind of fear appeal to be used
2. The level of discrepency to be introduced in the message
3. The type of source that will be percieved by the target group as a credible source
4. Wheather to use one sided & two sided messages.
5. Wheather to use a factual & emotional appeal or a combination of both.
6. Channel of the medium to be used for the transmission of the message.
7. Wheather conclusions of the audience or not.
8. Pre existing attitude & their knowledge will tell us about (crucial recievers) / important reciever characteristics that is crucial to attitude change

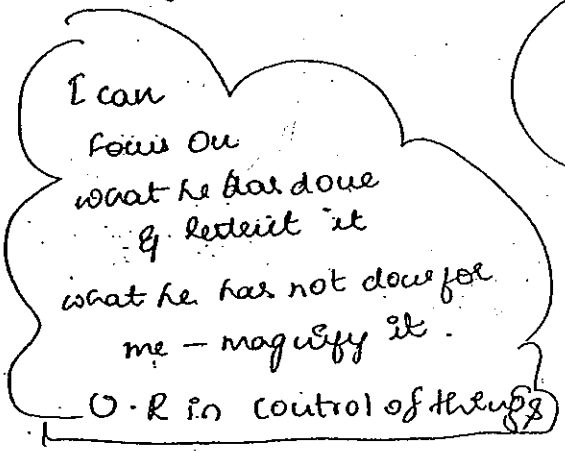
Function it performs.

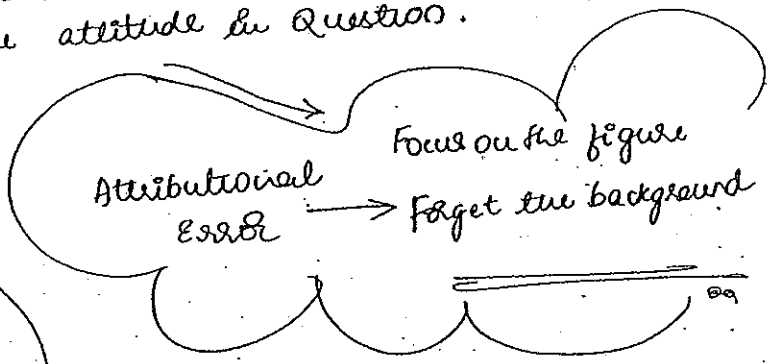


1. Knowledge & understanding function.
2. The attitude that serves knowledge or understanding function can change by enriching the knowledge base of the attitude holder FOR INSTANCE, If the ~~Prejudiced white individual having anti-black attitude~~ is exposed to the achievement of blacks in various fields then the prejudice attitude serving the understanding function can be altered to establish more complete and logical cognitive structure.

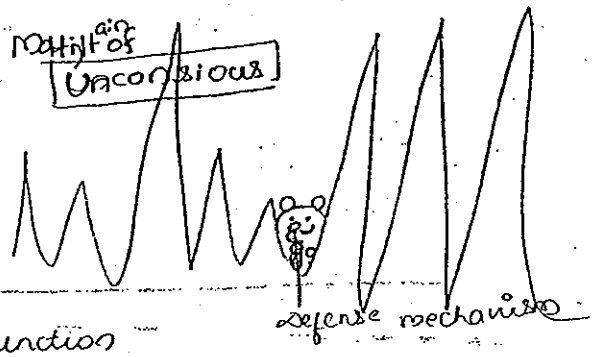
NEED FUNCTION

An attitude can serve need function by helping the individual get his material and non material requirements addressed. such attitudes are likely to change if the attitude holders goals or needs have changed & no longer being satisfied by the attitude in Question.





Ego defensive functions:



Ego defense mechanism is the function of the attitude holder.

→ It is very difficult to Evaluate, prejudice than some feeling which is: –ve or +ve

Ego defense attitudes are more difficult to change as they are aroused due to the feeling of insecurity in the attitude holder. These attitudes stem more from the characteristics of attitude holder rather than the characteristics of attitude object. Such attitudes are unlikely to be changed by the procedures which work with other types of attitude such as providing new information or offering positive incentive for change. As ego defences are erected to protect the person from the threat of the conflict therefore it is first necessary to remove this threats & conflicts before the attitude change can occur, this can sometimes be done by providing supportive atmosphere and then carrying out psychotherapy to enable the individual to acquire the insight into their defense mechanisms and grow out of their emotional conflicts.

Value Expressive function

A girl with "Equality" as the self basic value. ← Giving clothes for poor of the caste / providing free educ° to children of her caste.

But the question is "y?" only to her caste people 'Equality' is not defined/achieved this way

so, we change set of attitudes which represents these values – changed value expressed attitudes are difficult to change because values are very important & central part of the individuals cognitive structure. However the change would occur if people are seriously dissatisfied with their self concept & with their "present values"

Rokeach showed that individuals attitude & behaviour got changed following the demonstration that it was not really consistent with one of the subjects basic value and that is 'equality for all'

Theories of ATTITDOE CHANGE :

1. Dissonance theory
   - @. Festinger's cognitive desonance theory
2. consistency theories
   - a] Balance theory by Heider
   - b] congruity theory by Osgood sui & Tannenbaum
3. Reinforcement theories
   - a]. cc b]. I c . 3] OL
4. Perceptual theories
   - a] self perception theories by Daryl Bem
   - b]. Social Judgement theory by Sherif Hovland
   - c]. Attribution theory.

Def:- Attitude change is a function of change in the Reinforcement & sources of reinforcement can be external / internal to the person.

Festinger's Cognitive Dissonance Theory :

Festinger's theory is the most popular theory of attitude change for two reasons,

1. It offers a general theory of human social motivation.
2. The breadth of application of the theory exceeds any other consistency theory.

Social Motivation [n ach, n affiliation, need for approval, n of power] Guided by dissonance / ties Behind all this.

Dissonance ⇒ state of anxiety.

Any type of incompatibility causes dissonance in the individual. conflict between Value Vs attitude say

Conflicts

1. Approach ↔ approach two individuals Equally "nice" ready to marry you.
2. Avoidance ↔ Avoidance which party to choose BJP V/s congress
3. Beaten by teacher Or Beaten by Father ?!?
   Approach ↔ avoidance Smoking a cigarette.
   wanting to marry — doesnot want responsibility.
4. Multiple approach ↔ avoidance
   Wheather to eat burger or Pizza. when hungry.
   which one to buy Audi, BMW, Compare & contrast all +ve's & -ve's of both.

Dissonance when resolved gives way to Resonance.

Dissonance is a negetive drive state which occurs when an individual holds two & more cognitions & attitudes that happen to be psychologically inconsistent. It must however be mentioned even inconsistent cognitions may fail to produce dissonance if they donot have mutually incompatable behavioural implications.

Eg: Smoking cigerette inspite of knowing that it can result in lung cancer — creates dissonance of high order. then only dissonance will have an impact.

Basic Postulates :

1. Dissonance being psychologically uncomfortable motivates the person to take steps to reduce dissonance and achieve consonance. and to avoid situations that would increase dissonance.

2. The magnitude of dissonance increases as the importance & the value of the elements increases. [elements causing dissonance]

whether to wear Hoodies / Jacket to the class tomorrow would not cause a great dissonance to an individual as when the dissonance caused while making a choice between social approval & self esteem are involved.

3. The strength of the Pressure to reduce dissonance is the function of magnitude of dissonance.

Aronson, through his study showed that it makes more sense to speak of dissonance when there is an inconsistancy between the self concept and the cognition about the behaviour that violates the self concept

Brehm, found that dissonance is highest when the individual feels personal responsibility for the elements causing the dissonance.

Eg: A person who gets lung cancer, & is a smoker

A person who " —— " ——", & never smoke

~~Who faces most dissonance?~~

Dissonance produces discomfort and motivates the person to take steps to reduce the dissonance. Dissonance can be reduced by a number of direct and indirect methods. Some of the direct methods of reducing dissonance are,

1. Modification of the behaviour or the cognition about the behaviour.
2. By acquiring information that will help to support existing behaviour / existing attitudes
3. By adding new information to reduce dissonance.
4. Trivialisation, down playing the importance of inconsistent attitudes or cognition. It is a technique of reducing dissonance by minimalizing the importance of attitudes & behaviours that are inconsistant with the attitudes.

Eg: My 'car' dosnot emit much pollutants, so I dint have to get it checked. ↓ Importance., restore self esteem.

Unlike direct methods that focus on reducing the attitude behaviour discrepency, in the indirect methods the basic discrepency between attitude & behaviour is left unaddressed and the focus is on reducing the unpleasant emotions. feelings generated by dissonance.

this include,

1] Alcohol consumption, alcohol has antianxiotic property therefore helps to bring anxiety caused by dissonance down.

2]. Self affirmation is an exercise aimed at restoring positive self evaluations that seemed to be threatened by dissonance, this can be done by focusing on one's positive attributes and accomplishments.

3]. Taking one's mind off the dissonance like by doing meditation, Yoga & excercise.

4. Simple expression of positive affect.

Application of dissonance theory

1. Decision making

Wherever one has to decide between alternatives each having +ve & -ve features it is likely that the individual will experience some post decisional dissonance as he feels that he has selected the alternative with more -ve features and rejected the one with positive features. This dissonance is however overcome by supporting the alternative in favour of which decision has been made. The information will be selectively sort to make the selected alternative appear more attractive.

2. Forced compliance.

The less the person is paid for doing something against his beliefs and attitudes the greater is the likelihood i.e attitudes & beliefs would undergo a change and viceversa.

This finding was arrived at by Festinger and Carlsmith who through their experiments arrived at "less leads to - more. — effect." which states that offering small

rewards for engaging in counter attitudinal behaviour produces more resonance and therefore results in more attitudinal change than when larger rewards are offered.

Group I did the boring task → Told the subjects waiting outside that the task was interesting.
Received $1.

Group II did a boring task → Retained their opinion.
Received $20.

Q

Its like a person who is caught taking 50 Rs bribe will have lot more dissonance than the one who was caught taking a bribe of 50,000 Rs.

How do people overcome dissonance?
Self deception.

An employee who is underpayed, is more concerned with the development (vertical development) of institution & himself than an employee who is overpayed.

The principle on which it works is, Justification of Effort.

But in reality Theory of dissonance has no application.